

Research Note 85-66

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BASIC SKILLS RESOURCE CENTER:  
Military Educators Resource Network  
Design Plan

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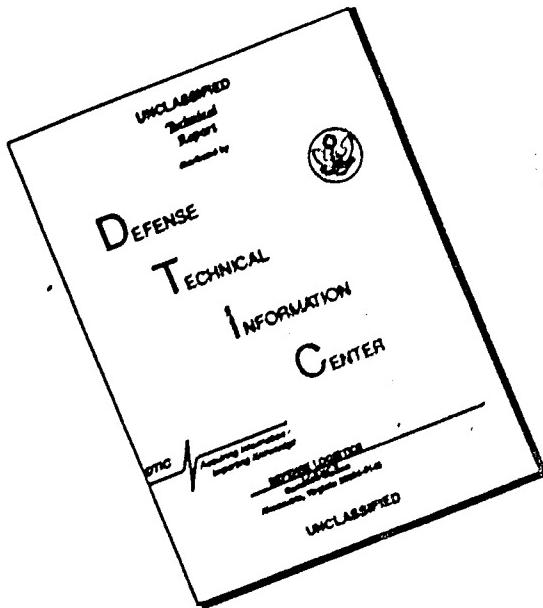
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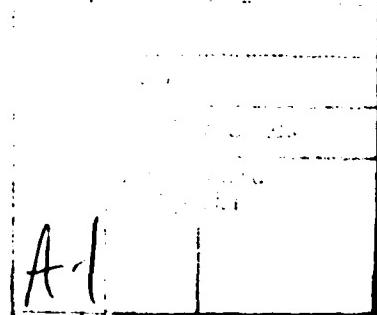
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Military Educators Resource Network (MERN) is a part of the Basic Skills Resource Center which provides military educators with information on basic skills and continuing education. This design plan (1) synthesizes the result of a needs assessment; (2) provides an overview of planning considerations for the MERN information center; and (3) details the resources needed to develop the MERN document collection and database.		

EXECUTIVE SUMMARY  
Basic Skills Resource Center  
Military Educators Resource Network: Design Plan

In Spring 1981, the Army Research Institute (ARI) contracted with InterAmerica Research Associates to operate the Basic Skills Resource Center (BSRC). This project consists of two interfacing components: the implementation and monitoring of basic research in the area of adult basic skills education and the design and implementation of an information service. The purpose of this report is to specify a plan for the operation of the information service component, to be called the MERN or the Military Educators Resource Network.

The design plan presented here is the product of a formal needs assessment, discussions with ARI and TAGO (The Adjutant General's Office) staff, and the technical knowledge and experience of the InterAmerica staff. The needs assessment data indicated that the greatest proportion of potential users would be the practitioner/educator group which includes ESOs, counselors, other education personnel at Army installations, and the Director of Education and education staff at the MACOMs (Major Commands). Although this represents the primary target population for whom any database would be developed and to whom any services and publications would be directed, it is not planned that this group be exclusively served, since many of the services and resources would also be of value to the researchers at ARI and to the policymakers within the Education Directorate of TAGO. Therefore, it is planned that these latter two groups be served insofar as their information needs fall within the parameters of the services to be provided by the MERN to the primary user group.

Through the synthesis of the needs assessment data, subsequent discussions with ARI and TAGO, and the technical input of InterAmerica staff the mission for the MERN was defined. Specifically, it is to provide practitioners, researchers, and policymakers, respectively, within the Department of the Army (DA), with up-to-date information relevant to basic skills and continuing education research and program development.

The specific functions that have been defined in carrying out the mission include:

- Development of a computerized database;
- Dissemination of information; and
- Qualitative and quantitative evaluation of all services.

The database will be representative of research and program development efforts in the areas of basic skills education. In addition, it will include descriptions of Army basic skills education programs. Moreover, in order to respond to user requests which are not within the scope of the database, it will include reference and referral information.

Dissemination of information will be provided to users through a variety of proactive user services. These include:

- an inquiry response service;
- a current awareness service;
- a referral service;
- a document delivery service; and
- a publications dissemination service.

The inquiry response service corresponds to a library reference service. The MERN's inquiry response system, however, will go beyond the typical reference service in that users will be provided with information and not simply guided to where it is available.

The current awareness service will consist of two components: current journal table of contents and selective dissemination of information. The intent of the first service is to periodically provide all target users with photocopies of the tables of contents of key journals in the education field. The customized selective dissemination of information service involves the creation of a user profile and matching it with new materials entered into the database. It is planned that this service be initiated as a demonstration project for overseas Senior ESOs and Education Directors.

A referral service will be provided to users who request information beyond the scope of the MERN. This service, operated as a sort of "rolodex online", will provide users with references to relevant individuals and organizations.

A document delivery service will be provided through careful cooperation between ARI and the MERN. Through this service users will be able to acquire copies of selected non-copyrighted materials. A publication dissemination service is also planned, through which users will be provided with the following materials:

- a brochure and rolodex card;
- a newsletter; and
- fact sheets.

The brochure and rolodex card will be used primarily to advertise the MERN services. The newsletter and fact sheets, on the other hand, will be used to disseminate timely and useful information to users.

Qualitative and quantitative evaluation of the database and all user services will also be another important function of the MERN. Activities will be measured in order to ascertain how well the MERN is operating internally. In addition, the MERN will be assessed externally through maintenance of statistical data and user reactions to the services being provided.

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## PREFACE

The Department of the Army is strongly committed to providing educational and training opportunities to its soldiers in order to ensure that they will possess the skills necessary to learn and perform their Army jobs. The primary delivery system for educational opportunities provided to soldiers is the Army Continuing Education System (ACES). The ACES program is an integrated system of voluntary career and self-developmental education opportunities. Overall, ACES has been designed to improve individual skills and knowledge through education. Thus, a range of educational opportunities are included in ACES. Examples include: the Basic Skills Education Program (BSEP), the High School Completion Program (HSCP), the Advanced Skills Education Program (ASEP), college preparatory courses, English as a Second Language (ESL), and others.

In an effort to expand and improve BSEP, the Army has awarded a contract to InterAmerica Research Associates, Inc. to develop and operate the Basic Skills Resource Center (BSRC). Funded through the Army Research Institute for the Behavioral and Social Sciences (ARI), contract number MDA 903-82-C-0169, the BSRC project has been conceptualized to assist the Army in meeting its research and information needs relative to basic skills education. The BSRC is composed of two interfacing components: a research component and an information component.

The research component has been designed to develop and implement a

plan of related research activities relevant to basic skills education in the Army. A research plan has been developed and implemented by InterAmerica that includes the conduct of five interrelated research studies which would contribute to research findings in the areas of basic skills education, learning strategies, and when feasible, the application of educational technology to these research topics. Following the completion of these activities, a research conference is to be held in order to share the research results, findings, and recommendations with selected members of the research community. It is also anticipated that the proceedings of this conference will be formally published and disseminated in order to enhance the use of these research contributions.

The second focus of the BSRC project includes an information component structured to develop and operate an information service whose purpose is to provide researchers, policymakers, and practitioners within the Department of the Army with information that is responsive to their educational and research needs. Preliminary activities undertaken by project staff and related to the information component included the completion of a needs assessment. Based on the results of the needs assessment activities, see report entitled Basic Skills Resource Center: Information Component Needs Assessment Report, project staff undertook the development of a design for the BSRC information service, to be called the Military Educators Resource Network (MERN).

The purpose of this document is to identify a design plan for the MERN which clearly delineates its mission, goals and objectives, and

operational procedures. Thus, in total, this discussion provides a working framework for the implementation and operation of the MERN.

Acknowledgements are extended to Dr. Charlene Rivera and Ms. Judi Dover DeCarme who together authored the report and to all those who supported us through the conceptualization and production of this report: Dr. Zita Simutis, the Contracting Officer's Technical Representative, Ms. Helena Barsam, Ms. Beverly Buford and Dr. Richard Kern, from ARI, who provided useful suggestions and recommendations throughout the writing of the report; Lieutenant Colonel C.L. Anderson, and other policymakers at the Adjutant General's Office who reacted to the initial draft of the report; and to Ruth Clements, Jane Itzel, and Cindy Swiggard for their untiring clerical support.

It should be noted, however, that the views, opinions and conclusions that are expressed are those of the InterAmerica BSRC project staff and should not be interpreted as an official Department of the Army position, policy, or conclusion, unless so designated by other official documentation.

Rocco P. Russo  
BSRC Project Director

## CHAPTER 1

### INTRODUCTION

InterAmerica Research Associates has been contracted by the Army Research Institute for the Behavioral and Social Sciences (ARI) to operate The Basic Skills Resource Center (BSRC). The BSRC has two interfacing components. One component deals with the implementation and monitoring of basic research in the area of basic skills education. The second component, which is the subject of this report, requires the design, implementation and operation of an information service. This document serves as a design plan which summarizes InterAmerica's strategy for the implementation and operation of the information service component - the Military Educators Resource Network (MERN).

#### Background

Data collected through a needs assessment, designed and conducted by InterAmerica staff, provided an empirical base for the design of the MERN. The assessment assisted in the clarification of who should be served, the focus for database development, and how potential users would like to access information.

Prior to undertaking the needs assessment, ARI and InterAmerica staff concurred that the information service should be designed to respond to the real needs of its users. Thus, the needs assessment was designed to serve as one of the major indicators for defining the operational scope of the MERN.

Needs assessment activities were undertaken between April and July 1982. Specifically, the activities were intended to address the following objectives:

- to determine who would be the major information service users;
- to assess the information needs of potential user groups;
- to identify the scope of the database to be developed;
- to identify the services that should be made available; and
- to determine how information should be made available to users.

#### Synthesis of Needs Assessment Findings

The needs assessment findings provided guidance for the specification of a design for an information service. The major findings, together with their implications for the design of the MERN are summarized below.

User Groups. The needs assessment findings confirmed that potential users of an information service would be practitioners, researchers, and policymakers within the Department of the Army (DA). The greatest proportion of potential users were found to be the practitioner/educator group which includes ESOs, counselors, other education personnel at Army installations, and the Director of Education and education staff at the MACOMs (Major Commands). This

group was, thus, designated as the major target audience for whom the MERN services should be designed. Although it represents the target population for whom any database would be developed and to whom any services and publication(s) would be directed, it is not planned that this audience be exclusively served since many of the MERN services and resources would also be of value to the researchers at ARI and to the policymakers within the Education Directorate of The Adjutant General's Office. Therefore, it is planned that these latter two groups will be served insofar as their information needs fall within the parameters of the services to be provided by the MERN to the target user group. It is also conceivable that once the MERN is operative, individuals outside the targeted audiences may request services. If this occurs, a strategy and policy for responding to requests from a broader audience will be developed jointly with ARI staff.

Proposed Database Subject Areas. The needs assessment findings indicated no specific trend with regard to the major subject area or areas to be included in the MERN database. Potential users identified a wide range of topics. Their responses included many unique, yet overlapping subject areas. It was also found that the variety and range of subject areas named far exceeded those related to the basic skills area. This finding suggested one of two options for consideration in the planning of the MERN document collection and database. They were:

- to include subject areas identified by all possible user groups; or
- to focus services and subject areas to those identified by the target group which would be most likely to use the MERN services and products.

After considering the implications of these options, InterAmerica recommended that the second one be adopted. This option was selected because it provides a general criteria for the development of the document collection and database as well as for the design of user services.

Frequency of Use of the Information Service. The needs assessment results substantiated the supposition that potential users would not automatically utilize an information service. For this reason, it was recommended that an aggressive promotional and outreach program be developed in order to stimulate and encourage its use.

Although the target users reported knowledge of a plethora of information sources, they indicated that their use of these sources was minimal. It was also found that target users were not generally aware of the extent of services that could be available to them.

The findings regarding the frequency of use and currently available sources of information have implications for the planning of services to be provided. It was thus recommended that the information service should include:

- the proactive dissemination of information; and
- the operation of an inquiry response system.

User Access. Based on the finding that users will not automatically utilize an information service, ease of access became a major consideration. The potential users indicated that their first

preference was for direct computer access with telephone access as an acceptable second option.

While computer access is an attractive and technically feasible alternative, during the early implementation stage of the MERN it was not believed to be practical. Thus, it was recommended that all users be provided with access to the MERN services via telephone. This approach assures that users will have an easy way to access the MERN's database and services. In addition, it allows for the collection of statistical data regarding user requests which are important in the development and expansion of the database.

Nonetheless, in order to assess the practicality of later providing users with direct computer access to the MERN database, two pilot tests were recommended. One would involve the linking of the MERN database with four or five installation libraries where computer terminals are available and where personnel are already trained in the general principles of database searching techniques. Librarians at the selected sites would act as the intermediaries between users and the MERN database. This approach not only provides for efficient use of resources, but also assures that the MERN is not seen as a competitor to existing library resources. In addition, utilization of existing resources could provide continuity to the MERN information services and stimulate users to take greater advantage of existing local resources.

A second pilot test that could be undertaken would provide a select number of ESOs with direct computer access. While these individuals would also have telephone access to the MERN, they would be encouraged to undertake their own computer searches after receiving training on database searching techniques. This approach provides a means of evaluating the pros and cons of providing direct database access to primary users on database searching techniques.

Summary. The needs assessment results served to define key issues with regard to users, types of services that should be offered, the scope and content of the database, and the mechanisms users preferred to access it. These data gathered through the needs assessment together with input from ARI and TAGO, as well as the technical expertise of InterAmerica staff, provides the scope and parameters for the design of the MERN information services.

## CHAPTER 2

### INFORMATION CENTER PLANNING CONSIDERATIONS

The purpose of this chapter is to provide a broader understanding of the framework for the design of the MERN. The chapter includes a plan for establishing its identity, a description of its mission, a delineation of goals and objectives, as well as an overview of other relevant issues to be considered in its planning and design.

#### Establishment of an Identity

In the formative stages of an information center, it is essential to establish an identity which will make the services to be provided easily recognized by potential users. Since it is projected that the planned information service will later assist all branches of the armed forces, the name Military Educators Resource Network (MERN) was selected. The naming of the center helps to assure that the information service to be provided by InterAmerica Research Associates becomes a "household word" which will come to mind as a potential resource when users have information needs.

#### Mission, Goals, and Objectives

In the conceptualization of a service system, it is useful to differentiate among three levels of specification: the mission, the goals, and the objectives. The mission consists of a broad statement of purpose. In this case, it refers to the basic purpose for the

establishment of the MERN. The goals specify the long-term services to be provided, and the objectives delineate the specific functions and/or activities which are expected to be accomplished.

The MERN mission is to provide practitioners, researchers, and policymakers, respectively, within the Department of the Army (DA), with up-to-date information relevant to basic skills and continuing education issues useful for educational research and program development. The conceptualization of this mission is derived from the needs assessment data, from conversations with ARI staff, and from the technical experience and expertise of the MERN staff.

The goals of the MERN, based on the findings of the needs assessment, are:

- to provide relevant information related to educational programs for use by Army educators, researchers, and policymakers, respectively;
- to develop a computerized database of information not currently available to Army educators; and
- to establish an effective means of providing access to the MERN services within the DA.

The specification of a mission and delineation of goals provide the parameters for the delineation of objectives. The specific objectives or functions in carrying out the mission established for the MERN include components in each of the areas specified below:

- Database Development: to design and implement a database that includes research findings and educational options in the area of basic skills education and research, Army basic education program descriptions, and referral information.

- Information Dissemination: to provide inquiry response, current awareness, document delivery, and referral services; and to prepare and distribute useful publications to the MERN users.
- Information Service Evaluation: to provide a means for assessing how well users are being serviced; and to determine the efficiency and cost effectiveness of the information services that are being provided.

A clear understanding of the MERN mission, goals, and objectives is necessary in order:

- to establish realistic expectations of services to be provided;
- to provide criteria for establishing policies and procedures; and
- to supply a baseline against which to evaluate the success and effectiveness of the MERN.

#### Overview of Other Related Issues

Important factors considered in the design and operation of the MERN are related to its management. These include considerations regarding staffing, service policies, specific services to be provided, and internal and external evaluation procedures. These issues, as they relate to the implementation of the MERN services, are discussed in the following chapters.

## CHAPTER 3

### DEVELOPMENT OF THE MERN DOCUMENT COLLECTION AND DATABASE

A well-developed collection of materials and effective retrieval of information from it are necessary foundations to support the MERN's goal of providing access to literature and resources needed by Army educators. Many information resources are widely publicized and are easily available to the MERN's potential audience. For this reason, it would be redundant for the Network to devote its efforts to collecting these resources. The focus, therefore, will be on improving users' awareness of and access to the lesser-known literature of the field.

#### Collection Development

Establishment of a core collection of materials which are important to Army educators will be a preparatory step for development of the bibliographic database. The stages involved in this process consist of identification and selection, acquisition, and processing of resources. Each stage is discussed below.

Identification and Selection of Resources. The subject areas identified in the needs assessment and to be included in the MERN's collection are listed in Exhibit 3.1. They provide the parameters for the collection development process. The emphasis in collection

Exhibit 3.1

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SUBJECT COVERAGE OF THE  
MERN  
COLLECTION AND DATABASE

Basic skills curricula descriptions, instructional materials, and tests in the following functional literacy and numeracy areas:

- Computation;
- ESL;
- Listening;
- Reading; and
- Writing.

Instructional planning to include:

- Learning strategies; and
- Self-paced instructional programs.

Computer-assisted instruction to include

- Computer literacy;
- Equipment descriptions and evaluations;
- Software descriptions and evaluations; and
- Systems descriptions and evaluations.

Other areas to include:

- Curriculum and educational evaluation program techniques;
  - Needs assessment techniques;
  - Army installation program descriptions and related activities; and
  - Military and appropriate federal agencies' research in the area of basic skills education, and computer assisted instruction.
-

development will be on "fugitive literature," that is, literature that is difficult to locate because it is unpublished or published outside the traditional channels of a specific field. It is proposed that the collection consist of the following types of materials: bibliographies, books, conference reports, directories, dissertations, government publications, journal articles, legislative and regulatory materials, lesson plans, newsletters, pamphlets, research papers, statistical data, technical reports, and tests.

Because a significant amount of material of interest to the potential users is informal in nature (e.g., papers presented at conferences or locally developed curriculum guides) and is often never published, it is important that the MERN staff seek to identify these items in a very active and continuous fashion. When a particular document of interest is identified, the author or issuing body will be contacted by telephone or letter to request a copy for the MERN collection. Also at that time, the MERN's purpose and services will be described and an attempt will be made to establish procedures for automatic receipt of future relevant items from those authors or organizations.

In order to locate relevant materials in a timely manner, MERN staff will identify those organizations most likely to produce titles of interest and request that they automatically send any new materials to the MERN. By identifying the important organizations within its scope and regularly soliciting all their relevant materials, the Network will be able to bring unpublished items to the attention of those individuals who can best utilize them. Procedures for carrying this

out are discussed in the section on acquisitions. In some cases, the title of a specific document of interest may be identified, rather than just an organizational source. Titles are likely to be identified when a citation appears in a journal or newsletter or when an inquirer calls with one citation and wants to know what else has been written on the topic. Procedures for the acquisition of these items are outlined in the next section.

The process of identifying materials for the collection will also involve reviewing, on a regular basis, published sources for potential acquisitions. These sources include journals, directories, catalogs, conference proceedings, newsletters, bibliographies, accessions lists from other organizations, and searches of online databases.

In many cases, materials will be acquired with little knowledge of their complete contents or quality. Therefore, upon receipt, all items will be closely examined to determine whether they are appropriate to the Network's scope. Materials to be included in the collection should meet certain criteria. Thus, it is essential that a policy be adopted and consistently utilized to guide their selection. A proposed collection development policy is displayed in Exhibit 3.2.

#### Acquisition of Resources

The acquisitions process encompasses all the procedures involved in obtaining documents from a given author or organization for the MERN

Exhibit 3.2

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MERN  
COLLECTION DEVELOPMENT POLICY

The collection of materials developed and maintained by the MERN serves to increase Army educators' awareness of the literature of their field and aids the MERN staff in responding to user requests and preparing publications. Before inclusion in the collection, each item will be evaluated according to the following criteria:

- Relevance to the MERN's scope;
- Significance of its contribution to the field;
- Relevance to Army Educators;
- Soundness of research methodology;
- Timeliness;
- Accuracy; and
- Availability to users from a reliable source. In those cases where extremely pertinent materials are not currently available, the criterion of reproducibility will be applied instead.

An attempt will be made not to duplicate items from the ERIC microfiche collection in the MERN collection.

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collection. A flow chart shown in Exhibit 3.3 depicts the process that will be carried out by the MERN staff.

In order to obtain fugitive literature and unpublished materials, potential organizational sources will be contacted to solicit materials. Exhibit 3.4 contains a list of representative sources to be periodically contacted.

In order to obtain published materials periodically, a request will be made to have the MERN added to a mailing list and, if appropriate, to automatically receive materials as they are produced. The initial communication with these potential sources will consist of an introductory letter explaining the MERN's mission and operations and a request for copies of materials they have produced. In turn, an offer will be made to provide interested individuals and organizations with a copy of the MERN publications. Form letters will be developed to most efficiently utilize staff time and to streamline the acquisitions process. A sample introductory letter is shown in Exhibit 3.5. A form requesting information about the publication's availability will also be enclosed (see Exhibit 3.6). In order to monitor the relevance of the materials received from individual organizations and to eliminate any organizations whose materials are found to be inappropriate, feedback mechanisms will be established between the acquisition and selection functions.

It is anticipated that a large portion of the materials requested by the MERN staff will be supplied as complimentary copies. Many

Exhibit 3.3

GENERAL MATERIALS ACQUISITION PROCESS

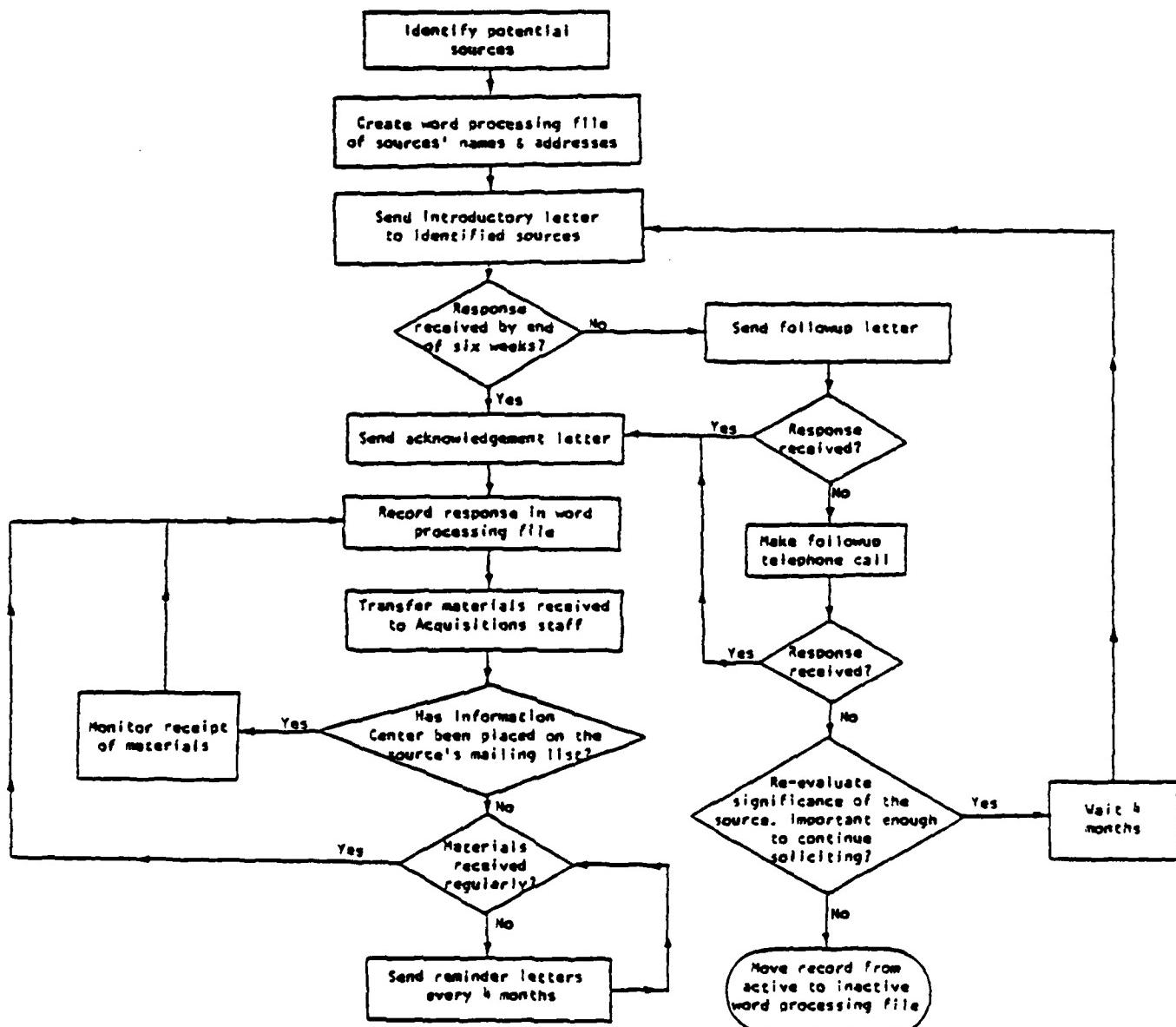


Exhibit 3.4

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**REPRESENTATIVE ACQUISITION SOURCES FOR THE MERN COLLECTION**

**Associations:**

Adult Education Association of the U.S.A.  
Association for Educational Data Systems  
National Association of Public Continuing and Adult Education  
Association for the Development of Computer Assisted Instructional  
Systems

**Government Agencies:**

Air Force Human Resources Laboratory  
Army Research Institute for the Behavioral and Social Sciences  
Defense Language Institute  
Department of Education  
Department of the Army, The Adjutant General's Office  
General Accounting Office  
Job Corps  
National Center for Education Statistics  
National Institute of Education  
Naval Personnel Research and Development Center

**Information Centers:**

Army Library  
National Computer Program Abstract Service

**Research Centers:**

Center for Naval Analyses  
Indiana University, Reading Research Center  
Institute for Defense Analyses  
Michigan State University, Institute for Research on Teaching  
Millersville State College, Adult Education Resource Dissemination  
Center  
Montclair State College, National Multimedia Center for Adult  
Education  
University of Illinois, Center for the Study of Reading

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Exhibit 3.5

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SAMPLE  
INTRODUCTORY LETTER TO  
ACQUISITION SOURCES

Dear \_\_\_\_\_:

The Military Educators Resource Network (MERN) is an information service network for individuals involved in Army education. Through means such as responding to information requests, producing a quarterly newsletter, and implementing other information dissemination programs, the MERN's goal is to expand Army educators' awareness of resources available to them in carrying out their mission.

In order to support these activities, the MERN is developing a collection of materials in the area of adult education. Aspects of education of particular interest include counseling, computer technology, curriculum and program evaluation methods, and administration.

The MERN would like to acquire, on a complimentary basis, single reference or review copies of any materials you produce that fall within the scope described. The materials you send will be reviewed by the MERN staff for inclusion in the MERN computerized database and for review or listing in the MERN newsletter. This is an opportunity for your work to become better known -- citations from the database are sent to individuals requesting information on specific topics; and the newsletter reaches several hundred Army education practitioners, policy-makers, and researchers. If you provide current price and ordering information, the MERN will also provide that information to interested persons.

In exchange for copies of materials, you would receive a complimentary subscription to the MERN newsletter, the MERN Circuit. If you have any questions, you may contact me at (703)528-8480.

Cordially,

---

Dr. Charlene Rivera  
MERN Information Services Director

PUBLICATION INFORMATION  
CONCERNING SOLICITED MATERIALS

Publication Title:

Availability (Please check all that apply):

- Publication order number  
(Specify whether ISBN, catalog number, stock number, etc.)
- Single copies free.
- First \_\_\_\_\_ copies free.
- Limited quantity available.
- Limited quantity available free.
- Available in bulk.
- Discount if ordered in bulk. Specify. \_\_\_\_\_
- Price postpaid: \$ \_\_\_\_\_ hardcover \$ \_\_\_\_\_ paperback.
- Price: \$ \_\_\_\_\_ hardcover  
\$ \_\_\_\_\_ paperback
- Postage and handling extra.
- Minimum order \$ \_\_\_\_\_.
- Minimum order of \_\_\_\_\_ copies.
- Not sold separately. Price for complete set or subscription:  
\$ \_\_\_\_\_.
- Send check or money order with order.  
Make payable to: \_\_\_\_\_
- Not available from this source. Available from: (Please give name and address).
- Contact regional office:
- Publication out of print.
- Other:

organizations and authors will be willing to provide a complimentary copy because they know a reference to their publication will appear in the database printouts and the item may be reviewed in the newsletter, thereby increasing the awareness and utilization of their work.

In addition to the literature and materials obtained complimentarily, the MERN will develop a small collection of purchased reference materials to assist in responding to inquirers' information requests and to develop information products. These materials will be acquired by establishing accounts with publishers as needed.

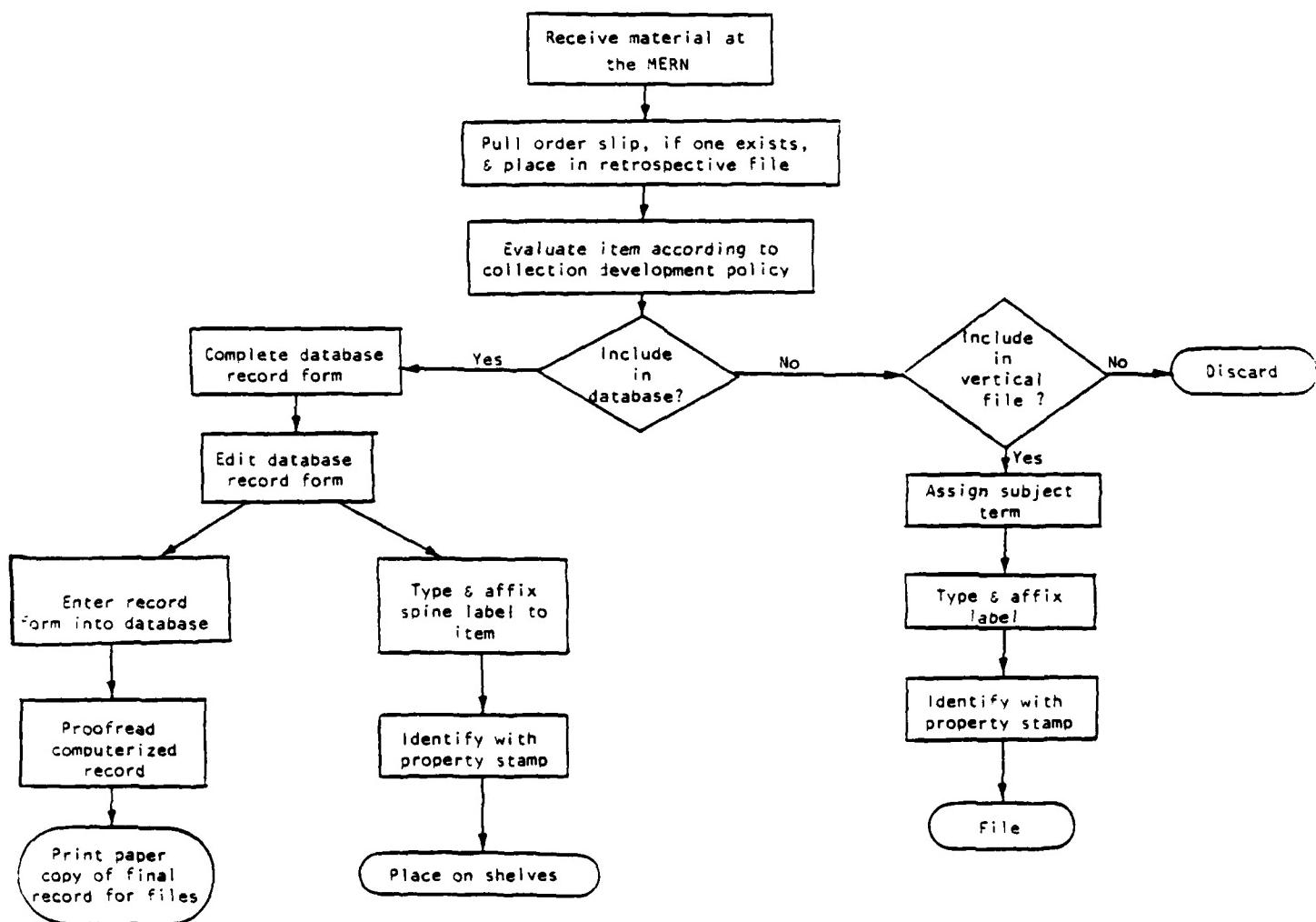
Processing Resources. A flow chart of the steps involved in procesing materials is shown in Exhibit 3.7. Once selected and acquired, the materials will be imprinted with the MERN name and separated into two collections. Items of significant research interest will be processed for inclusion in the MERN database while materials short-lived in nature will be included in a vertical file. The vertical file will be similarly classified and indexed.

- announcements and preliminary programs of conferences;
- announcements of new publications;
- pamphlets of less than 25 pages; and
- short article clippings from newspapers, newsletters, and popular magazines.

Vertical file materials are considered to be of reference value, but do not contain enough substantive information to justify their inclusion in the database.

Exhibit 3.7

INFORMATION PROCESSING STEPS



Materials to be included in the database will be assigned several index terms to describe each item's subject area, as described in detail in the Database Development section. In order to classify the actual physical documents and thus determine their location on the MERN collection shelves, an index term which best describes the overall topic will be assigned as the "major descriptor." This term will be typed on a label and attached to the spine or front cover of the item. All the materials will then be arranged alphabetically by subject. If more than one item is assigned the same subject term, they will be subarranged by accession number. The items acquired for the MERN collection that are to be included in the vertical file will be similarly classified and indexed.

#### Database Development

As the core collection of MERN materials is organized, a computerized database will be prepared. It will ultimately allow users anywhere in the world to retrieve information from the MERN collection. A computerized database makes it possible to retrieve data quickly in a format customized to the users' needs, because it allows access to information by data elements such as publication date, names of research institutions, and combinations of subject areas discussed in the same document. In order to provide parameters for the preparation of the MERN database the following items need to be considered: the contents of the database, the operation of the computerized information retrieval system, a database record format, and procedures for processing the raw materials into the database. Each is discussed in the following sections.

Database Contents. The MERN database will contain citations and abstracts for all the documents that are selected for the collection, except those items that are placed in the vertical file. In addition to the citations and abstracts for bibliographic items, the database will also contain other types of information judged to be useful to the MERN's audience. These include:

- descriptions of educational research projects currently being sponsored by ARI and other military and Federal research and development agencies;
- descriptions of curricula that could be used in Army education programs;
- descriptions of educational programs implemented at Army Education Centers;
- descriptions of courseware used in computer-assisted instruction programs at Army installations; and
- referral information for responding to queries outside of the MERN's scope.

This information will be gathered through various means such as reviewing education journals, computer journals, manufacturers' literature, and Army documents; disseminating questionnaires to ESOs; receiving input from ARI and TAGO personnel; and other methods.

Database Retrieval System. If possible, the MERN database will be loaded with Bibliographic Retrieval Services (BRS), a computerized system that uses a sophisticated storage and retrieval package. The BRS software operates in an online real-time environment to support the moment-by-moment needs of the MERN staff and its users. The system combines sophisticated and flexible searching techniques with an easy-to-learn interactive language.

It features Boolean logic which allows searchers to define the parameters of their interest, create a set of database records that match those parameters, expand the set by adding other sets to it, and reduce the size of a set by intersecting it with another set. Virtually every field of the database record will be searchable, thus ensuring that the search results meet the user's specifications.

In addition, the system has capabilities far beyond retrieval of fixed field information (e.g., publication year); it can also perform searches of an entire free text. Through the technique of free text searching, one can locate a particular word anywhere that it appears in a record, whether it is in the title, the abstract, or the index terms. The system will also allow the MERN staff to store search strategies in the computer's secondary memory and to periodically run the stored strategies against the new database records.

Database Record Format. Each item to be represented in the database must be recorded in a standardized format for computerization. The format created for the MERN database record serves as a concise representation of a complete document and facilitates entry into and retrieval from a computerized system. If feasible, the database records will use the Machine Readable Cataloging (MARC) format, a widely adopted standard for the computerization of bibliographic information. The MERN database record format is also designed to be flexible enough to represent all types of resources in the collection, not only bibliographic materials but also non-bibliographic components such as program descriptions, research project summaries, etc. A

sample copy of the format that will be used for the MERN materials is shown as Exhibit 3.8. The letters or numbers after each field name are the code by which the computer recognizes that field. It is not necessary that all parts of the form be completed for each database record. Although the form is basically self-explanatory, a brief explanation for some of the fields follows.

The Accession Number is a unique number assigned to each record; it is very useful in a computerized system. The Type of Resource indicates whether the item is a book, journal article, program description, etc. Information in the Sponsoring Organization field would be used to indicate which government agency or private institution supplied the research funding. The Originating Organization/Corporate Source field would be used to specify the organizational affiliation of the author. The Notes field will be used to state whether the document contains a bibliography, survey instruments, or other features. These data could be incorporated into the Abstract field; however, listing such information in the Notes field provides quicker access. The Abstract field will include, for bibliographic records, a brief summary of the document; for non-bibliographic records, it will include descriptions of specific curricula, programs, or computerized courseware that have been implemented by Army Education Centers.

The Index Terms are designed to describe the subject content of each document. Each database record will have between 5 and 10 index terms assigned. The one term that best describes the overall content of the document will be selected as the Major term and included in that field.

MERN  
DATABASE RECORD FORM

Accession Number -- 090 #a \_\_\_\_\_

Type of Resource -- TR \_\_\_\_\_

Title -- 245 \_\_\_\_ #a \_\_\_\_\_

Subtitle -- #b \_\_\_\_\_

First Author or Program Point of Contact -- 100 \_\_\_\_ #a \_\_\_\_\_

Second Author -- 700 \_\_\_\_ #a \_\_\_\_\_

Third Author -- 700 \_\_\_\_ #a \_\_\_\_\_

Sponsoring Organization -- 710 -- #a \_\_\_\_\_

Originating Organization/Corporate Source -- 710 \_\_\_\_ #a \_\_\_\_\_

Contract or Grant Number -- 500 #a \_\_\_\_\_

Publication Date -- 260 16 #c \_\_\_\_\_

Report Number or Order Number -- 088 #a \_\_\_\_\_

Journal Citation -- 490 08 (Journal title) #a \_\_\_\_\_

(Volume or number, and pages) #v \_\_\_\_\_

Availability -- 265 #a \_\_\_\_\_

Abstract -- 520 #a \_\_\_\_\_

Notes -- 590 #a \_\_\_\_\_

Index Terms - Major -- 690 \_\_\_\_ #a \_\_\_\_\_

Index Terms - Minor -- MN \_\_\_\_\_

Date Entered -- 910 #a \_\_\_\_\_ Date Verified -- DV \_\_\_\_\_

To lend consistency to the assignment of subject descriptors, a list of authorized terms called a "thesaurus" will be used. A thesaurus is a compilation of terms that are approved for indexing; each term's place in the thesaurus as a whole is shown by listing along with it other terms that are broader, narrower, or related. A thesaurus also makes references from unauthorized terms to authorized ones (for example, Basal Reading, use Basic Reading), and occasionally provides scope notes to define how a term is used. An excellent thesaurus which covers all aspects of education has been developed by the Educational Resources Information Center (ERIC). Because development of a thesaurus unique to the MERN would be expensive and duplicative of terms already included in ERIC, it is recommended that the ERIC Thesaurus be used to index the collection. A page from the ERIC Thesaurus is displayed in Exhibit 3.9. For those situations where a more specific term is needed, a new term will be developed by MERN staff. This involves examining the work of several authors to see what terminology is most consistently used to describe a concept, selecting or creating the most appropriate term, and establishing the term's relationships with other thesaurus entries. A list of all the ERIC terms and all original terms used in indexing will be maintained and updated periodically.

The Date Entered field reflects the date that the material was processed by the Network staff. Because the information concerning availability of materials may change over a period of time, it is necessary to update the database records on a regular basis. The following procedure will be established to implement such updates in

## Exhibit 3.9

## SAMPLE PAGE FROM THE ERIC THESAURUS

## DESCRIPTORS

## Computer Based Instruction / 47

Education	COMPETITIVE SELECTION	Jul 1966	Concept Formation	RT	Automatic Indexing
Job Performance	CUE 204 RIE 142 GC 330		Difficulty Level		Computer Science
Minimum Competency Testing	BT Competition		Knowledge Level		Language Processing
Performance			Language Arts		Linguistic Theory
Personnel Evaluation	RT Selection		Language Processing		Mathematical Linguistics
Skills	Achievement (School)		Linguistic Competence		Mathematical Logic
Student Evaluation	Achievement Criteria		Metacognition		Programming Languages
	Educational Opportunities		Perception		Semantics
	Educational Supply		Scientific Literacy		Statistics
	Employment Opportunities				Structural Analysis (Linguistics)
	Open Enrollment				Word Frequency
Competency	Personnel Selection		Comprehension Development (1966-1968)		Computer Adaptive Testing
USE COMPETENCE	Screening Tests		use COMPREHENSION		use COMPUTER ASSISTED TESTING
	Selective Admission				Computer Aided Instruction
COMPETENCY BASED EDUCATION			Comprehensive Districts (1967-1968)		use COMPUTER ASSISTED INSTRUCTION
	Mar 1960		use SCHOOL DISTRICTS		
	CUE 694 RIE 1,827 GC 330		Comprehensive High Schools (1967-1968)		Computer Assisted Instruction
SN Educational system that emphasizes the specification, learning, and demonstration of those competencies (knowledge, skills, behaviors) that are of central importance to a given task, activity, or career.	use DIFFICULTY LEVEL		use HIGH SCHOOLS		use COMPUTER ORIENTED PROGRAMS
UF Consequence Based Education	Compliance (Legal)	Oct 1977	Comprehensive Programs		Computer Assisted Instructional Management
Criterion Referenced Education	CUE 181 RIE 359 GC 610		CUE 108 RIE 206 GC 320		use COMPUTER MANAGED INSTRUCTION
Output Oriented Education	SN Conforming to laws or legal directives		SN A full set of courses including college preparatory, commercial, and vocational courses, usually implemented at the secondary level (note: prior to 1960, the use of this term was not restricted by a scope note)		Computer Applications
Performance Based Education (1974-1980)	BT Cooperation		use FLEXIBLE WORKING HOURS		use COMPUTER ORIENTED PROGRAMS
Proficiency Based Education	RT Court Judges		Comprehensive Attendance		Computer Assisted Indexing
NT Competency Based Teacher Education	Federal Legislation		use COMPULSORY EDUCATION		use AUTOMATIC INDEXING
	Law Enforcement		COMPREHENSIVE EDUCATION	Mar 1960	COMPUTER ASSISTED INSTRUCTION
BT Education	Levels		CUE 59 RIE 32 GC 330	Mar 1960	CUE 2,040 RIE 2,826 GC 310
RT Academic Standards	Legal Problems		SN Education that is legally required to be available to and attended by the school-age population		SN interactive instructional technique in which a computer is used to present instructional material, monitor learning, and select additional instructional material in accordance with individual learner needs
Accountability	Legal Responsibility		UF Compulsory Attendance		UF Ca
Behavioral Objectives	Legislation		Mandatory Education		Computer Assisted Instruction
Competence	Component Building Systems (1966-1970)		BT Education		Computer Assisted Learning
Individualized Instruction	use BUILDING SYSTEMS		RT Access To Education		Computer Based Instruction
Minimum Competencies	Component Systems		Educationally Disadvantaged		Computer Based Laboratories (1967-1980) #
Minimum Competency Testing	use BUILDING SYSTEMS		Educational Opportunities		BT Programmed Instruction
Performance	COMPONENTIAL ANALYSIS	May 1969	Educational Supply		RT Autoinstructional Aids
Student Certification	CUE 105 RIE 108 GC 450		Free Education		Computer Managed Instruction
	SN Methodological procedure in linguistics and cognitive ethnomethodology used to explain, distinguish, or study the meaning of sounds, words, and sentences (including the contexts behind terminological choices of particular cultures) by specifying common components, features, or responses (note: prior to 1961, the use of this term was not restricted by a scope note)		Government School Reforms		Computer Oriented Programs
COMPETENCY BASED TEACHER EDUCATION	COMPONENTIAL FEATURES (Language)		Public Education		Computers
	CUE 541 RIE 1,722 GC 400		School Attendance Legislation		Educational Media
SN Educational system that stresses the explicit demonstration of specified performances as evidence of what a teacher should know and be able to do	Language Theory		School Education		Educational Technology
UF Consequence Based Teacher Education	Phenology		COMPUTATION	Mar 1960	Feedback
Education	Scientific Methodology		CUE 426 RIE 210 GC 480	Mar 1960	Individualized Instruction
Criterion Referenced Teacher Education	Semantics		SN The act or method of calculating or estimating through the use of number operations and/or other mathematical processes		Intramedia Differences
Output Oriented Teacher Education	Sound Sociopragmatics		UF Calculation (1966-1980)		Man-Machine Systems
Performance Based Teacher Education (1972-1980)	Structural Analysis (Linguistics)		BT Counting		Programmed Instructional Materials
Proficiency Based Teacher Education	Composition (Literary) (1966-1980)		RT Mathematical Applications		Programmed Tutoring
Competency Based Education	use WRITING (COMPOSITION)		Calculators		Teaching Machines
Teacher Education	Composition Measurement		Mathematical Formulas		Computer Assisted Learning
	use CHEMICAL ANALYSIS		Mathematics		use COMPUTER ASSISTED INSTRUCTION
BT Academic Standards	Composition Processes (Literary)		Measurement		COMPUTER ASSISTED TESTING
Accountability	use WRITING PROCESSES		Numbers	May 1960	CUE 67 RIE 99 GC 320
Behavioral Objectives	Composition Skills (Literary) (1966-1980)		Quantitative Tests		SN Use of computers in test administration or construction
Competence	use WRITING SKILLS		Ratios (Mathematics)		UF Computer Adaptive Testing
Individualized Instruction	COMPETITION	Mar 1978	COMPUTATIONAL LINGUISTICS		Computer Tailored Testing
Performance	CUE 296 RIE 142 GC 520		CUE 99 RIE 318 GC 450		BT Testing
	SN Averaging between individuals or groups sharing the same object or goal		SN Branch of linguistics concerned with the use of computers for the analysis and synthesis of language data - for example in machine translation, word frequency counts, and speech recognition and synthesis		AT Computer Oriented Programs
UF Competitive Selection	Competitive Selection		NT Machine Translation		Computer Science
ET Behavior			BT Linguistics		Item Banks
RT Achievement Need	Comprehension (1966-1980)				Test Construction
Aggression	CUE 684 RIE 618 GC 110				Test Items
Class Rank	Comprehension Development (1966-1980)				Tests
Conservation					Computer Based Instruction
Goal Orientation	Comprehension				use COMPUTER ASSISTED INSTRUCTION
Group Accents					
Homophony Relations					
Interpersonal Relationship					
Performance					
Social Behavior					
Social Exchange Theory					
Competitive Basing					
CA 325					

\* = Two or more Descriptors are used to represent this term.  
The term's main entry shows the appropriate coordination.

an efficient manner. It will consist of the printing of each database record and the development of a form letter to be sent annually to each source listed in the Availability field. When up-to-date information has been received from the source, the Date Verified field will be updated.

Processing the Database Record Forms. The process of examining each document to capture the significant information for the database record is a very exacting one. All subsequent retrieval of information about that document depends on what is initially recorded about it. For this reason, quality control is essential throughout the process.

The Information Specialist will carefully scan the document to locate all essential data elements, such as publication year and report number. An abstract will be prepared by reading through the table of contents, preface, introduction, and index, and scanning the item's text. It is recommended that the abstracts meet the specifications established by the American National Standards Institute, entitled American National Standard for Writing Abstracts (ANSI Z39.14-1979). Index terms will be assigned, as discussed above.

After completion of the form, it will be edited to conform to the guidelines established in the Government Printing Office Style Manual. The next process involves entry of the data into the database at a key-to-disk computer terminal. A proofreading step will take place following data entry, as the last phase of the quality control process.

A detailed procedures manual will be written to outline very specifically what should be included in each field and how the information should be formatted. A tracking system will also be devised to monitor the flow of documents through the processing system.

Plan for the MERN Database. In order to have the MERN database available as a tool for information dissemination, a large number of records must be processed. Thus, the MERN staff will direct its initial efforts to collecting and processing materials in an attempt to build a database of 1,000 records 3 months after the MERN begins operations. Through the course of the contract, it is anticipated that the database will grow to a size of 4,000 records.

Database Enhancement through Addition of ERIC and NTIS Database Records

As previously discussed, the MERN will not attempt to obtain for its collection copies of materials that have already been made widely accessible through sources such as ERIC and NTIS. In the bibliographic portion of the computerized database, however, it may be desirable to represent not only the materials actually contained in the collection but also references to relevant materials that are not physically located at the MERN. There are advantages and disadvantages to either approach; these are outlined below.

Including in the database only the actual contents of the collection

has some benefits. The file would be a truly unique database and would contain very little overlap with other databases. Some information science professionals feel that creating overlapping databases causes a duplication of effort in staff time, computer storage, retrieval activities, and so on. Another advantage would be that accuracy of the data could be ensured because the documents and correspondence concerning the documents' availability are accessible in-house and can be easily verified, whereas accepting citations from other databases comes with no guarantee of data integrity.

However, there are many favorable aspects involved in incorporating citations from other databases into the MERN's. By doing so, the MERN would be creating a single source for all the literature of interest to Army educators. Individuals wanting to locate everything on a certain topic in the field of military education can be confident that searching this one database will meet their requirements. It appears that members of the MERN target audience are not regular users of computerized literature retrieval services, which may indicate that they are probably not aware of a significant portion of the material that could be brought to their attention; thus, a combined database would be very useful to them. Another advantage is that searching the citations in a single database, such as the MERN would be less expensive than searching for them in a commercially available database.

After weighing all these factors, InterAmerica feels that the quality of service that could be provided with a combined database is highly

preferable, and recommends that this option be selected. Developing a system to retrieve relevant citations, or what is known as a remote search capability, and to store them in a computer is somewhat complicated and will require some software development. The process involved in accomplishing this are outlined below.

Because the ERIC and NTIS databases are the most significant ones for the identified areas of interest, the MERN staff will initially incorporate records from these two files into the database. ERIC and NTIS are also good choices because they are not copyrighted and, therefore, do not require contractual agreements and the payment of royalties in order to store their records in the MERN database. A brief description of ERIC and NTIS follows:

ERIC: Sponsored by the National Institute of Education, the ERIC database comprises report literature and journal literature in educationally relevant areas: career education; adult, vocational, and technical education; counseling and personnel services; reading and communication skills; educational management; handicapped and gifted children; information resources (including educational media/technology and library/information sciences); higher education; languages and linguistics; early childhood education; rural education and small schools; science, mathematics and environmental education; social science/social studies; teacher education; tests, measurement, and evaluation; disadvantaged; and junior colleges. Each database record includes a citation, assigned controlled vocabulary, and abstract.

NTIS: Produced by the National Technical Information Service, the NTIS database covers U.S. government-sponsored research and development technical reports from over 200 Federal agencies and some reprints, federally-sponsored translations, and foreign-language reports in areas of major

technical interest. It is multi-disciplinary in scope and includes information on behavioral and social sciences; biological and medical sciences; chemistry; electronics and electrical engineering; mathematical sciences; mechanical, industrial, civil and marine engineering; methods and equipment; military services; and missile technology, as well as many other subjects. Each database record includes a citation, assigned controlled vocabulary, and abstract.

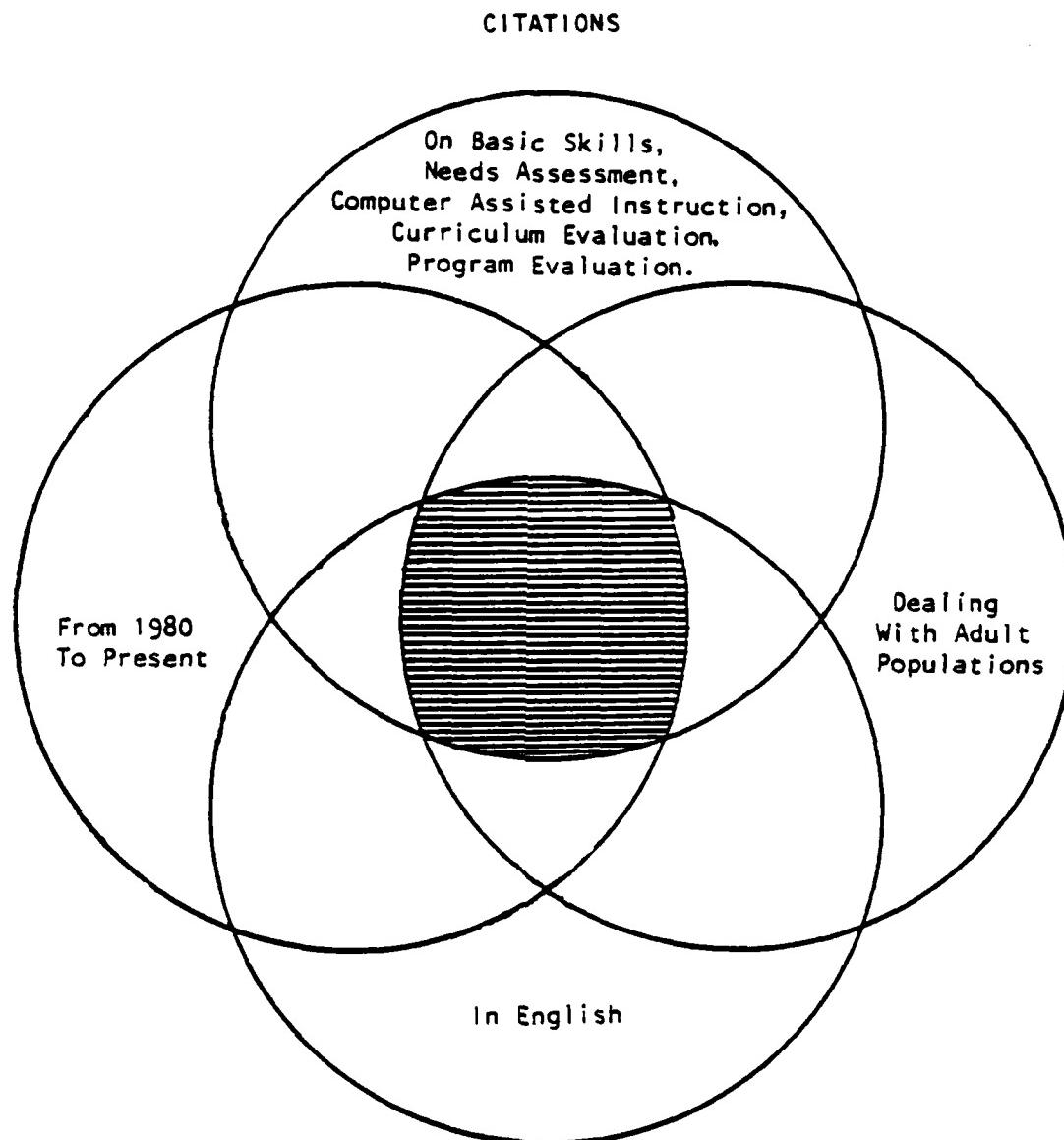
The ERIC and NTIS files are made accessible for searching by all of the major database vendors. Procedures will be established to ensure that these files are regularly searched to identify items of interest. After the ERIC and NTIS databases are updated each month, a staff member will perform a search on the updated portions of the two databases. In order to ensure that only relevant citations will be retrieved and incorporated into the MERN database, a complex strategy for searching ERIC and NTIS has been developed. The components of this search strategy are shown in Exhibit 3.10. As the exhibit demonstrates, there are four sets of records involved in the search, and only those citations forming the intersection of the four sets will be retrieved. Thus, all citations incorporated into the MERN database will meet the following criteria:

- deal with basic skills, computer-assisted instruction, curriculum evaluation, needs assessment, or program evaluation;
- focus on adults;
- represent documents written in English; and
- be up-to-date, i.e., 1980 to the present.

This search strategy will be stored in the computer so that the search can be repeated quickly and efficiently each month, without rekeying.

Exhibit 3.10

ERIC AND NTIS CITATIONS TO BE INCORPORATED INTO  
THE MERN DATABASE



The SHADED AREA represents the ERIC and NTIS citations  
that will be retrieved for the MERN database.

When the search has been completed, the results will be stored in the computer and, through a conversion program, will be transferred to the MERN database. The conversion program will also modify the records to match the MERN database record format.

## REFERENCES

- American National Standards Institute. American national standard for writing abstracts. New York: Author, 1979.
- Educational Resources Information Center. Thesaurus of ERIC descriptors. (9th ed.). Phoenix, Arizona: Oryx Press, 1982.
- U.S. Government Printing Office. Style manual. (Rev. ed.). Washington, D.C.: Author, 1973.

## CHAPTER 4

### USER SERVICES AND INFORMATION DISSEMINATION

In addition to the development of a well-organized and easily accessible database, the Military Educators Resource Network will provide a variety of services designed to disseminate information to its users. Information contained in the MERN collection and database provide the foundation for user services and information dissemination activities. This information will be repackaged in formats that are useful to its audience. The repackaging process involves reviewing, synthesizing, and interpreting the data to provide users with information, rather than just source documents. The services to be implemented by the MERN focus primarily on the target audience, that is, the educators/practitioners. However, as already noted, many of the services will also be useful to secondary audiences, which include researchers at ARI and policymakers within the Department of the Army.

Careful consideration has been given to all of the possible services that could be provided using the MERN collection, database, and other information sources. InterAmerica's recommendations for those services that are felt to be most valuable within the current budgetary constraints are presented here. The services to be offered by the MERN include an inquiry response service, a referral service, two forms of current awareness services, a document delivery service, and a publication development and dissemination service. In addition,

issues in information dissemination have been considered and are discussed in sections outlining access to the MERN, use of mailing lists, and promotion and outreach activities.

### User Services

The educators/practitioners form the primary user group for whom the MERN services will be developed. While geographically diverse, this audience is relatively homogenous in terms of its assigned mission to Army education. The educators are often faced with problems unique to their installations in terms of programs needed, number of soldiers to be served, and local education resources available. These situations require the educators to seek out information that will aid them in addressing their problems. Beyond this, the MERN audience is most interested in being kept abreast of current research and significant events in their field. Thus, in addition to an inquiry response service, the MERN will provide a combination of proactive user services.

Inquiry Response Service. Inquiry response is the service that users are most familiar with when they think of information centers, since it corresponds quite closely to the reference service provided by a librarian when asked for assistance in locating information. The MERN's inquiry response system will go beyond the typical reference service because it will locate and transmit information to the user, rather than simply guide the user to where the information can be found.

In the inquiry response service offered by the MERN, staff will respond, as accurately and completely as possible, to information requests in the subject areas outlined in Chapter Three, Exhibit 3.1. A variety of strategies will be utilized to locate information necessary to provide an adequate response. The inquiry response process may involve searching the MERN database, searching commercially available databases, perusing the collection of materials and photocopying specific pages, sending one or more of the MERN's publications, telephoning individuals in the Army or outside organizations, referring the inquirer to a more appropriate source, or visiting an area library to locate information. Depending on the type of inquiry, the format of the response to the user may be a verbal transmission of information over the telephone, database printouts, a publication, a photocopy of pages from a document, or a personal letter containing the appropriate information.

Receiving Requests -- Inquiries will be received by telephone, by mail, and in person. In-person visits will be welcome, in the event that individuals want to use the collection themselves; however, the telephone will be the predominant method of submitting requests. The Network will have staff available to receive telephone requests from 8:30 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m., Monday through Friday eastern time.

In order to eliminate the charges incurred by users in making long-distance telephone calls, InterAmerica explored the possibility of installing a toll-free 800 WATS line. The cost was prohibitive based on the expected volume of calls. An ARI staff member

investigated whether InterAmerica could be linked into the Autovon system, but it was found that this was not possible. Thus, the regular long-distance telephone lines appear to be the best option for users both in CONUS and overseas. This option will work quite well for CONUS personnel, but is not well suited to overseas educators due to the different time zones and the expense of making calls to the U.S. Additional means to facilitate serving overseas personnel are being examined. A plan will be formulated and discussed with the COTR within 6 months.

An Information Request Form has been designed to assist users in articulating their information needs. Both CONUS and overseas personnel may complete and submit the form by mail or refer to it when they call the MERN Information Specialist. A sample copy of the form is shown in Exhibit 4.1. The form is designed to assist users in identifying the key concepts of interest to them, how the information is to be used, what response format is needed, etc. Mechanisms have been developed to distribute the form to potential information requesters. These include:

- printing the form in the first issue of the newsletter, along with an article describing the inquiry response service;
- enclosing a copy of the form with each inquiry response that is mailed out; and
- disseminating the form at conferences attended by ESOs.

Processing Inquiries -- For each request received by the MERN, an inquiry processing form, shown in Exhibit 4.2, will be completed. The

MERN  
INFORMATION REQUEST FORM

Name \_\_\_\_\_  
Position \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone number \_\_\_\_\_  
Date information is  
needed \_\_\_\_\_

Describe in narrative form the topic of your request:

List the "key" terms that would be used to describe this concept.

---

---

---

How is this information to be used?

---

---

What form(s) of information would  
you be interested in?

- citations and abstracts for  
research papers and journal  
articles
- education program descriptions
- current research project  
summaries
- points of contact for  
further information

How many years do you want  
the retroactive search to  
cover?

---

---

Are you interested in:

- locating everything  
on this topic
- a few of the "best"  
items

**MERN  
INQUIRY PROCESSING FORM**

Requester's Name: \_\_\_\_\_ Date and Time  
of Request: \_\_\_\_\_  
Title or Rank: \_\_\_\_\_ Date Needed: \_\_\_\_\_  
Address: \_\_\_\_\_ Date Completed: \_\_\_\_\_  
\_\_\_\_\_ Turnaround Time: \_\_\_\_\_

Telephone: \_\_\_\_\_

Request:

"Key terms" \_\_\_\_\_

How the information will be used: \_\_\_\_\_

**FORM(S) OF INFORMATION TO BE INCLUDED:**

- Citations and Abstracts
- Education Program Descriptions
- Current Research Project Summaries
- Points of Contact for Further Information

Years to include in Search \_\_\_\_\_

Scope of Search:

- Comprehensive
- Limited

How Requester Learned About the MERN:

- |                                                |
|------------------------------------------------|
| Type of Requester:                             |
| <input type="checkbox"/> Educator/Practitioner |
| <input type="checkbox"/> Policymaker           |
| <input type="checkbox"/> Researcher            |
| <input type="checkbox"/> Other, specify: _____ |

**ACTION TAKEN:**

- Database Search
- MERN Database
- Other, specify: \_\_\_\_\_

- Publication(s) sent

Referral(s) to: \_\_\_\_\_

Telephone call(s) to: \_\_\_\_\_

Other, specify: \_\_\_\_\_

**MATERIALS SENT:**

- Brochure
  - MERN Publications
- Specify: \_\_\_\_\_

- Personal letter

Photocopy from MERN collection

- Search results

Other, specify: \_\_\_\_\_

form will guide the Information Specialist in obtaining all the necessary data needed to respond to a request received by telephone or mail. The form will later be used to document precisely what action was taken in response to the request. On a monthly basis, forms will be filed in alphabetical order by the requester's last name and retained in case any follow-up on the request is necessary. The completed forms will be used to compile monthly statistics of the Network's activities, which will be included in the BSRC monthly reports. In addition, the information will be used for evaluation purposes, as described in Chapter 5.

Turnaround Time -- Establishment of an acceptable turnaround time policy is an important step toward ensuring user satisfaction. Turnaround time is defined as the period of time from submission of a request by a user to the receipt of a response. Although mail deliveries will in part determine the period of time within which the requester will receive the response, the MERN staff will work to ensure that a response is on its way in a timely manner. In support of this, the Network's policy on response time will be as follows:

- For quick reference questions such as locating a telephone number or address, the answer will be communicated by telephone by the next day.
- For questions requiring a relatively simple database search or examination of documents in the MERN collection, a 3-day turnaround is expected.
- Requests necessitating an extensive search of the MERN database and other databases, or telephone calls to other organizations, will be processed within 5 days.

If any request cannot be completed within these timeframes, a telephone call will be made to inform the inquirer that the request is still being processed.

Referral Service. Although all publicity emanating from the Network will very clearly indicate the scope of its services, it is anticipated that requests will be received that are beyond the MERN's scope. In these situations the MERN staff will provide the requester with a referral to the individual or organization that would most likely be able to answer the query. The proposed referral service would operate as sort of a "rolodex online." The MERN will set up the referral service by gathering information from ARI and TAGO personnel as well as other sources such as telephone directories. The information gathered will include the name, address, and telephone number of individuals and offices that deal with all aspects of Army education. These data will be transferred to database record forms in preparation for processing and entry into the computer. Whenever possible, a brief description of the service provided by the individual or office will also be included in the record. When an out-of-scope inquiry is received, the Information Specialist will search the database for an appropriate referral source and then supply the inquirer with as much information as possible.

Current Awareness Services. Current awareness services generally involve distributing, on a regular basis, information about new resources in a specific field. Because the MERN target population indicated a desire to be kept abreast of information in the field of

education as it relates to the Army; it is assumed that some type of current awareness service would be of interest to them. InterAmerica has explored the feasibility of offering several types of current awareness services and recommends implementation of the following: current journal tables of contents and selective dissemination of information.

Current Journal Tables of Contents -- The intent of this service is to periodically provide specialists with photocopies of the tables of contents of key journals in their field. Especially significant articles will be highlighted on the photocopies to indicate their importance. MERN staff will obtain the appropriate journals for review from the ARI Technical Information Center, and will subscribe to additional journals, not available through ARI, which are considered to be of primary importance. Along with the photocopied tables of contents, users will receive instructions on how to obtain copies of the articles through their post library or by requesting reprints from the authors. Although it is likely that the citations for these articles may also later appear in the database because they would have been abstracted and indexed in ERIC, this service informs users more quickly. It may also bring to the ESOs' attention journals they may be interested in subscribing to.

Selective Dissemination of Information -- This customized service involves creating a profile of an individual user's interests, storing it in the computer's secondary memory, and matching the profile against new citations each time the MERN database is updated. In

order to assist users in defining their interests, a checklist of potential topics will be prepared and distributed. ESOs interested in receiving this service will be encouraged to check the appropriate topics on the list and return it to the MERN. On a bimonthly basis, a computer search of the updated portion of the MERN database will be carried out for each user's profile. Records that match the profile will then be printed and mailed to the participant. Once TAGO has fully implemented its electronic mail system, it would also be possible to transmit records via this mechanism.

This service will be initiated as a demonstration project for overseas Senior ESOs and Directors because it is recognized that overseas Army educators are generally more isolated than CONUS personnel. If found to be successful, consideration would be given to also offering the service to Army educators within CONUS.

Document Delivery Service. The database the MERN plans to develop, and a great many of the publicly available databases, contain only short abstracts of complete documents. Although these databases tremendously facilitate awareness of the existence of these documents, it can be frustrating to attempt to obtain full text copies. It could be especially difficult for Army educators to obtain full text copies of the MERN database documents, in isolated areas where library resources are extremely limited.

Thus, MERN and ARI staff have agreed to coordinate a document dissemination service. Through careful planning and cooperation

between the ARI and the MERN, this service can efficiently supply a large portion of the items needed by Army educators without draining the MERN's limited resources and adversely impacting on the other services that the MERN proposes to provide. In order to make users aware of the service, the MERN database citations will indicate that non-copyrighted documents may be ordered from ARI. As the citations are mailed to users, the MERN staff will also send to ARI a list of the document titles which list ARI as a source, in order to allow ARI time to make preparations for providing the items. Thus, when inquirers receive MERN citations and wish to obtain a full-text copy of one or more of the non-copyrighted documents, they will request them directly from ARI. Should inquirers wish to acquire copies of copyrighted materials, they would be instructed to check their availability at their installation libraries or to contact the source listed in the Availability field of the database record.

Publications Development. The purpose for developing publications is to promote the MERN services and to report important new information in the area of adult and continuing education to Army educators. It is planned that the publication dissemination service will complement the Network's other services. The four types of MERN publications planned are a brochure, a rolodex card, a newsletter, and fact sheets.

A logo for the MERN will be designed by a graphic artist and printed on each item. The logo will reflect the concept of the MERN as a network of military educators sharing resources among each other.

Other printing details specific to each publication are discussed in the individual publication sections below.

Brochure and Rolodex Card -- A descriptive brochure will be developed to publicize and explain the MERN's purpose and services. The intent of the brochure is to promote and to inform interested individuals on how to most effectively utilize the MERN. The brochure will be widely disseminated to all ESOs and MACOM education personnel and to appropriate TAGO and ARI personnel. A copy will also be enclosed with each inquiry response, each acquisitions solicitation letter, and any other appropriate correspondence. Also, brochures will be disseminated at conferences attended by Army educators, in order to reach additional potential users. It is projected that for all these purposes approximately 1,200 brochures will be needed the first year. The brochure will have the MERN logo imprinted on it and will be designed on one sheet of heavy colored paper, folded into thirds and suitable for self-mailing. It will be submitted to the COTR for review and approval before being produced by a commercial printer.

An innovative promotional tool that InterAmerica has successfully utilized is the rolodex card. It will be similar to a business card in that it will contain the MERN's logo, name, address, and telephone number. The card, which has small slots punched in the bottom to make it usable in a standard-sized rolodex file, will be distributed to the educators, the researchers, and the policymakers along with the brochure.

Newsletter -- One of the most effective means of providing current information to a specific audience is via a newsletter. A newsletter is an especially good tool for regularly communicating new research findings and other news to Army educators. Thus, it is planned that the MERN staff will develop and publish a newsletter for all ESOs, appropriate TAGO and ARI personnel, MACOM education personnel, installation librarians, and the organizations and authors that submit acquisitions for the MERN's collection.

Originally, InterAmerica explored the possibility of writing a section or a column to be included in each issue of the ACES Advisor. However, the Public Affairs staff of TAGO indicated that since the ACES Advisor is not published on a regular basis and has no established production schedule, it could not become the MERN's reliable information dissemination tool. Thus, the publication of a specific MERN newsletter was supported by TAGO.

Topics to be covered in the newsletter articles will coincide with the subjects of interest identified in Chapter Three, Exhibit 3.1. Examples of feature article topics include some of the following:

- methods of teaching learning strategy skills to adults;
- current research issues addressed through the BSRC research component;
- how to improve students' motivation;
- problem-solving techniques for educational administrators;
- culture-fair testing; and

- tips for effectively implementing a computer-assisted instructional program.

In addition to the feature articles, it is planned that regular columns be written for inclusion in each issue. These could include:

- book reviews;
- descriptions of model education programs at particular installations;
- a question and answer column where readers submit problems they are encountering and where innovative solutions are provided; and
- a readers' exchange corner where people who have common education interests would trade information.

Articles will be written by the Writer/Editor guided by input from appropriate Army personnel. The newsletter contents will be submitted for approval by the COTR and the Public Affairs staff at TAGO. In order to assure timely publication, an agreeable timeframe for review will be worked out with both agencies.

The newsletter, to be called MERN Circuit, will be about eight pages long and will be issued quarterly. The text of the articles will be produced on word processing equipment. Graphic designs will be prepared for the name of the newsletter and for the column headings. After layout and paste-up are completed, the newsletter will be printed by a commercial printer on heavy colored paper with one-color ink.

Fact Sheets -- Fact sheets, as the name implies, outline the most important aspects of a particular topic and are generally printed on

one or two sides of a sheet of paper. This publication format is well-suited to practitioners' information needs because of its concise style and the list of resource information that can be included. It is planned that the MERN produce three fact sheets during the contract period. The fact sheets will be sent to the same audience as the newsletter, and additional copies will be maintained at the MERN for use in answering information requests on those topics. Topics will be determined by reviewing subjects of information requests frequently received and by anticipating user needs as trends develop in the field. Possible topics include:

- evaluation guidelines for curriculum materials,
- descriptions of preliminary research findings and products resulting from activities completed through the BSRC research component;
- description of the Army Education Information System (AREIS) project,
- descriptions of other ARI research projects, and
- guidelines for evaluating the effectiveness of adult basic skills teachers.

Each fact sheet will conclude with a brief list of resources that can be consulted for additional information; these citations will be taken from the MERN database. The fact sheets will be prepared by the Writer/Editor, and after approval by the COTR and TAGO, will be printed for distribution.

#### Information Dissemination

The services to be provided by the MERN require that a carefully planned information dissemination mechanism be developed, in order to

effectively link the MERN with its users. The issues the MERN staff considered in the design of an information dissemination mechanism include:

- how to facilitate the ESOs access to the MERN inquiry response service and database; and
- how to most efficiently disseminate materials to users.

Each of these issues is discussed in detail below.

Access to the MERN. The ease with which individuals can contact the MERN and receive information will be a key factor in determining its use. Based on this consideration, InterAmerica proposes to provide three methods of access -- telephone, computer, and mail.

The primary means for users to access the MERN will be by telephone Monday through Friday from 8:30 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m. eastern time, through a MERN staff member. Mail and in-person requests will, of course, also be accepted.

A secondary means -- direct computer access -- for some users will also be provided. Although two pilot studies were recommended in the needs assessment report, because of budgetary constraints, only one will be implemented. The pilot test to be conducted will link five Army installation libraries where computer terminals are available and where personnel are already trained in the general principals of database searching techniques. Librarians at these libraries would act as intermediaries between users and the MERN database.

After planning and approval by the COTR, the pilot test will be initiated 6 months after the MERN begins providing its services. Five installation libraries, chosen for their willingness to participate, their past and projected use of MERN resources, and their familiarity with computerized information retrieval systems, will be selected. MERN staff will work directly with installation library staff to ensure that each person involved in the pilot test receives training by MERN staff, printed documentation about the database and the computer system, and the offer of telephone consultation should any problems arise. To access the system, participants will be given a telephone number to call and a password to access the MERN file. Participants of the pilot test will be expected to supply their own computer terminals, to pay the computer connect time costs for searching, and to pay any long-distance telephone charges that may be incurred in searching.

Regular communication channels will be established with the pilot test participants in order to monitor their use of the system. After a 4-month testing period, the demonstration project will be evaluated. At that time, a recommendation will be made to expand direct computer access to all users, to discontinue its use, or to continue to offer both telephone and direct computer access.

Management and Use of Mailing Lists. In order to efficiently disseminate the products that will be developed, the Network will require access to a mailing list containing the names and addresses of potential publication recipients. Based on discussions with the Public Affairs staff of TAGO, it is understood that a computerized

mailing list of all ESOs and other education personnel exists. Provided that 2 weeks notice is given, the mailing list can be sorted to include only personnel appropriate for the MERN's use and then printed on pressure-sensitive labels. It is anticipated that these labels will be supplied free of charge each time the MERN has materials to distribute. The availability of this mailing list will greatly facilitate the MERN's dissemination activities and will eliminate the expense of having the MERN design and develop its own mailing list.

Some DA individuals and organizations who are to receive MERN products are not currently on the list. The MERN staff was informed that if it provided TAGO with the names and addresses of these personnel, for example ARI scientists, the names would be added to the mailing list and included in future print-outs of labels. Other individuals and organizations, such as those who send materials for MERN's collection, should also be included on a mailing list to receive its publications but may not be suitable for the Army's mailing list. In order to handle distribution of materials to these audiences, the MERN will maintain a mailing list of those names. Because this list of names is expected to be quite small, a computerized mailing list will not be created. Instead, the names will be typed on paper and photocopied onto mailing labels as often as needed.

#### Promotional and Outreach Activities

Promotion and outreach activities that will be undertaken will have two objectives:

- to increase the target audience's awareness of the MERN's existence and willingness to provide assistance, and
- to encourage individuals and organizations to routinely submit copies of relevant publications for the MERN collection.

The initiation of promotional activities must be carefully timed with the availability of the MERN's database and planning of each service. Promoting the Network before it can adequately respond to user demands will lead to user dissatisfaction, while waiting too long will create a lag period when the resources that have been prepared are not being used. If promotional activities are highly successful, they can create demands in excess of the MERN's capacity to serve additional users, and this too must be considered.

It is anticipated that the first promotion mechanism will be an introductory letter from the Directors of Education at the Major Commands or from the Director of the DA Education Directorate. It is hoped that the introductory letter will authorize and encourage ESOs and other Army Education Center personnel to use the MERN's services. The text of the letter can be written by MERN staff and, when approved, signed by the appropriate individual(s). The letter will then be photocopied and distributed to all ESOs along with a brochure and a rolodex card.

Another method of promotion will be the brochure which was described in the publications section. As discussed previously, the brochure will be widely disseminated to reach the target audience as extensively as possible. The dissemination plan includes enclosing a

brochure with all correspondence and distributing copies of the brochure at appropriate conferences. The brochure will often be an individual's first contact with the Network; therefore, it should very clearly describe the Network's purpose, audience, and services.

An additional avenue for promotion will be the newsletter. Though its primary function is to inform, the newsletter will also be used to tell readers about activities and services of the Network, such as the database and the inquiry response service.

A further item, which has the primary function of data gathering and a secondary function of promotion, is a short questionnaire that will be sent to all ESOs. The purpose of the questionnaire is to collect information to assist in database and publications development. The questionnaire will solicit information about any research projects or software development projects ESOs are currently undertaking; about innovative educational programs they have implemented; and about resources they have developed or have found useful in the areas of needs assessment, program and curriculum evaluation, or computer-assisted instruction. The information the ESOs provide will then be added to the database or will be incorporated into newsletter articles or fact sheets. Through completion of the questionnaire, the ESOs will learn more about the kinds of information the Network has available concerning other installations, and thus it will promote use of the MERN's services.

Development of an exhibit for conferences is another promotional mechanism that the MERN will use. Although no ACES conference is

scheduled for 1983, the Joint Chiefs of Staff are planning a week-long conference in April 1983 which all ESOs and MACOM education personnel will attend. One day of the conference will be designated Army Day, and thus, will be an appropriate time for the MERN to display an exhibit, give a brief oral presentation about the MERN's services, or provide training for pilot test participants. In addition, brochures and other publications will be disseminated. At the exhibit, MERN staff members will personally interact with potential users to outline how the MERN can assist them in their work and how they can assist the MERN by providing copies of any papers they write. This will also be an excellent time to obtain feedback on the MERN's services and suggestions for new services or topics to be covered in the collection.

#### Relationship with Other Organizations

The relationships that the Military Educators Resource Network establishes with other professional organizations are important because they help to indicate where and how the Network fits into the structure of the field it is intended to serve. The members and staffs of these organizations are a resource for the Network. They can strengthen the acquisitions process by providing publications for the collection, and can serve as a resource for referrals of questions that the MERN cannot adequately address. An active liaison program will also be instituted with other information organizations. Information organizations communicate among themselves concerning resources that may be of interest to others, exchange newsletters, and refer inappropriate inquiries to the appropriate information source.

Another type of linkage occurs when information centers search other organizations' databases to locate items for acquisition or to avoid duplication.

Examples of the professional associations of interest are the Adult Education Association of the U.S.A. and the American Personnel and Guidance Association. Other acquisitions sources are listed in Chapter Three, Exhibit 3.4. The Army Research Institute Technical Information Center; installation libraries; the ERIC Clearinghouse on Adult, Career, and Vocational Education; and the ERIC Clearinghouse on Counseling and Personnel Services are some of the information organizations with whom the MERN will establish contact. In order to make the relationships mutually beneficial, the MERN will add these organizations to its mailing list and will provide searches of its database to their staff members.

In order to establish the initial contact, it is proposed that the COTR or her representative and the MERN Director personally visit those that are located in the Washington, D.C. area and meet with their staffs. For those organizations located elsewhere, initial contact will be by letter with a subsequent telephone call.

## CHAPTER FIVE

### MANAGEMENT

The purpose of this chapter is to provide an overview of the MERN staffing pattern, the organization of activities, and the evaluation of services. The focus of the following discussion is on issues as they relate to the management of the Network.

#### Staffing of the MERN Center

The services to be offered, as well as the available financial resources, provide the parameters for the planned staffing of the MERN. These considerations have indicated a need for the following professionals to staff the MERN: the Information Services Director, the Database Manager/Information Specialist, and the Writer/Editor. Support staff will consist of a secretary.

The Information Services Director will be responsible for undertaking all administrative duties related to the MERN. These include overseeing all aspects of collection and database development as well as the implementation of user services. In addition, it will be the Director's responsibility to guide the design and content of all publications and to establish and maintain the mechanisms for working with ARI and TAGO in their approval and dissemination.

Promotion of the MERN services and outreach to new users will be an important aspect of the Director's responsibilities. The design and

continued evaluation of all the MERN services for the purpose of expanding and redefining their scope, as necessary, will also be the responsibility of the Director. In addition, the Director will plan and coordinate all phaseover activities. It should be noted that throughout all phases of implementation, the Director will work directly with the BSRC Project Director in the coordination of all MERN activities.

The Database Manager/Information Specialist has major responsibilities in the design of database specifications, the maintenance and operation of the database, the acquisition and processing of materials for the collection and the database, and the provision of direct user services. Once the database has been developed and the MERN has begun to provide services, the Database Manager/Information Specialist will interact directly with users requesting information. The Database Manager/Information Specialist will also be responsible for the design of a plan for data collection and the subsequent maintenance of statistical information regarding the use of the MERN.

The Writer/Editor will have major responsibility for the writing and production of all MERN publications. Responsibilities include design of all publication formats, coordinating all related printing, and establishing a dissemination plan.

#### Organization of the MERN Activities

In this section of the report, the organizational structure of the

MERN is discussed relative to the management of the major activities that are to be implemented by the MERN. This discussion includes consideration of the MERN facility, document collection and database development, user services, promotional and outreach activities, and reporting mechanism to ARI.

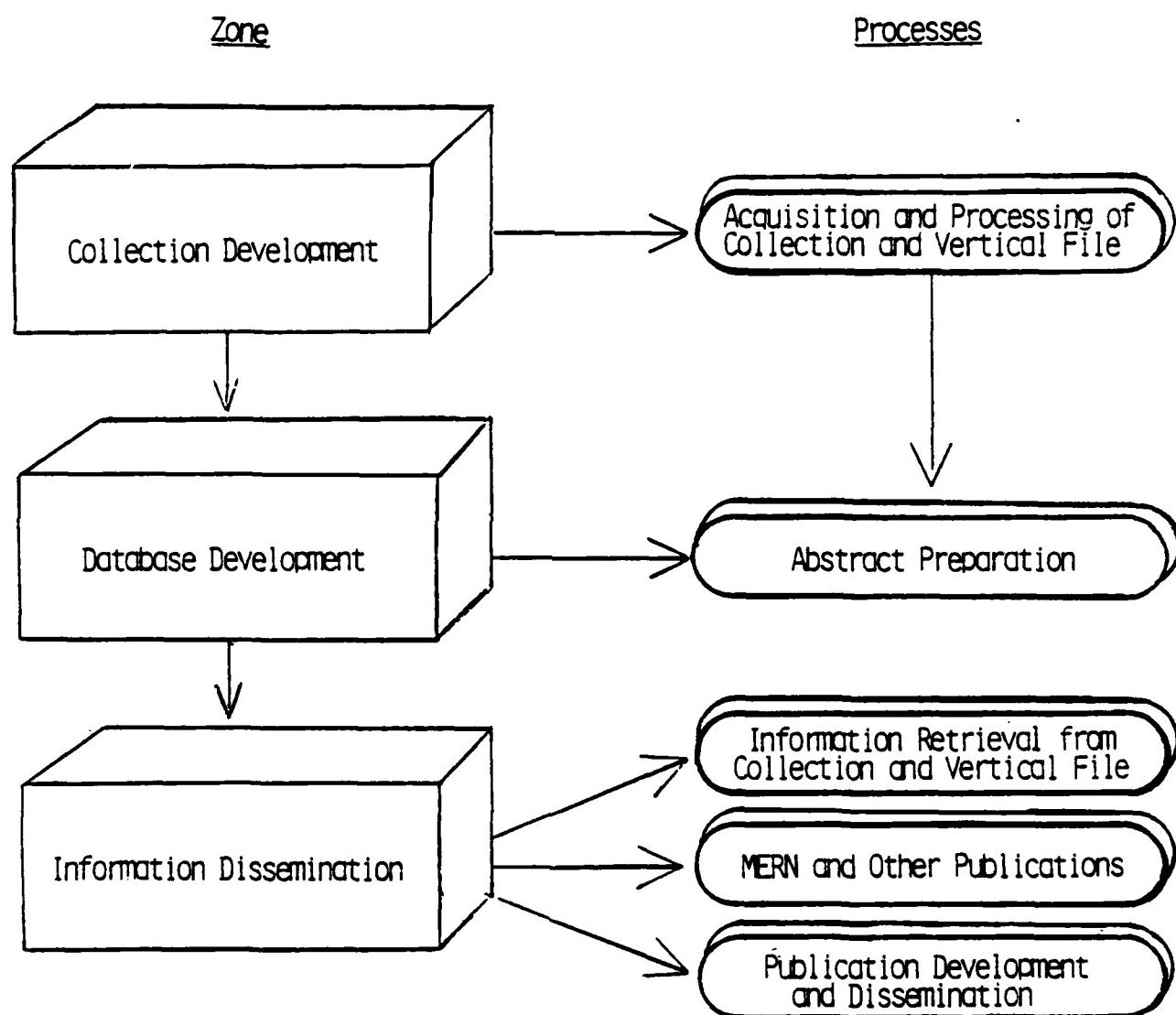
The MERN Facility. The MERN facility will be designed to expedite the processing of materials for the collection and to provide quick access to information required to serve users. The functions and processes to be carried out in the MERN information area are illustrated in Exhibit 5.1.

The collection and database development zones will be equipped with work tables and necessary supplies. The information dissemination zone will include a telephone, the collection, and the vertical file, as well as a computer terminal and a printer.

Collection and Database Development. Collection development will involve the stages described in Chapter 3 -- identification and selection, acquisition, and processing of materials. Database development, on the other hand, requires the identification of database fields, the development of selection criteria, the abstracting of necessary information, and the specification of how users will access information. In addition, the database will be enhanced through the addition of a select number of ERIC and NTIS records. In sum, the delineation of the database specifications and related activities represent an important first phase in the

Exhibit 5.1

THE MERN FACILITY FUNCTIONS



development of the MERN. The timeframe for the execution of all related activities is found in Exhibit 5.2.

User Services and Access to the MERN. User service activities to be developed include inquiry response, current awareness, referral, publication dissemination and document delivery services. The inquiry response, referral, and publication dissemination services will be generally provided to target users, while a component of the current awareness service, the selective dissemination of information will be provided only to overseas users. At present, in the execution of document delivery, users will be supplied with information regarding the source and availability of all references. Users may request documents which are tagged as being available through ARI. Other materials would have to be requested directly by users. Exhibit 5.3 illustrates the interrelationship between the MERN, ARI, and TAGO in the execution of all MERN services.

A critical aspect of providing users with information is access to the MERN. This activity involves several stages which have been outlined in Chapter 4. The task timeline for the provision of user services is found in Exhibit 5.4.

Promotional and Outreach Development. A major effort throughout all stages of the MERN's operation will be of a promotional nature. The effective execution of these activities requires that the MERN staff creatively design promotional strategies and publications to attractively inform the target audience about its existence and available services.

TASK TIMELINE

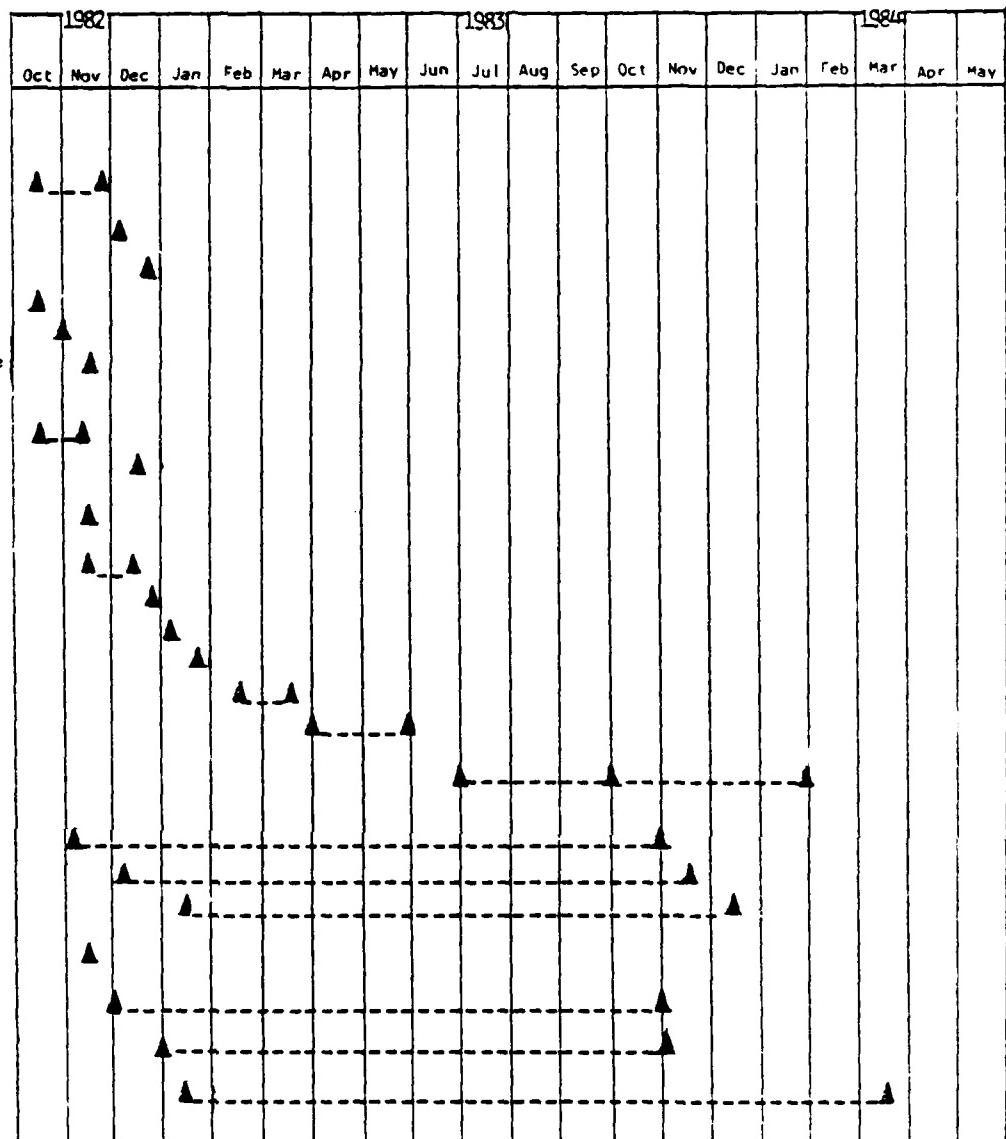
Exhibit 5.2  
COLLECTION & DATABASE DEVELOPMENT

Collection

- Identify potential acquisitions sources
- Send introductory letter to identified sources
- Monitor receipt of materials
- Review acquisition sources
- Order identified materials
- Process materials for database/vertical file

Database

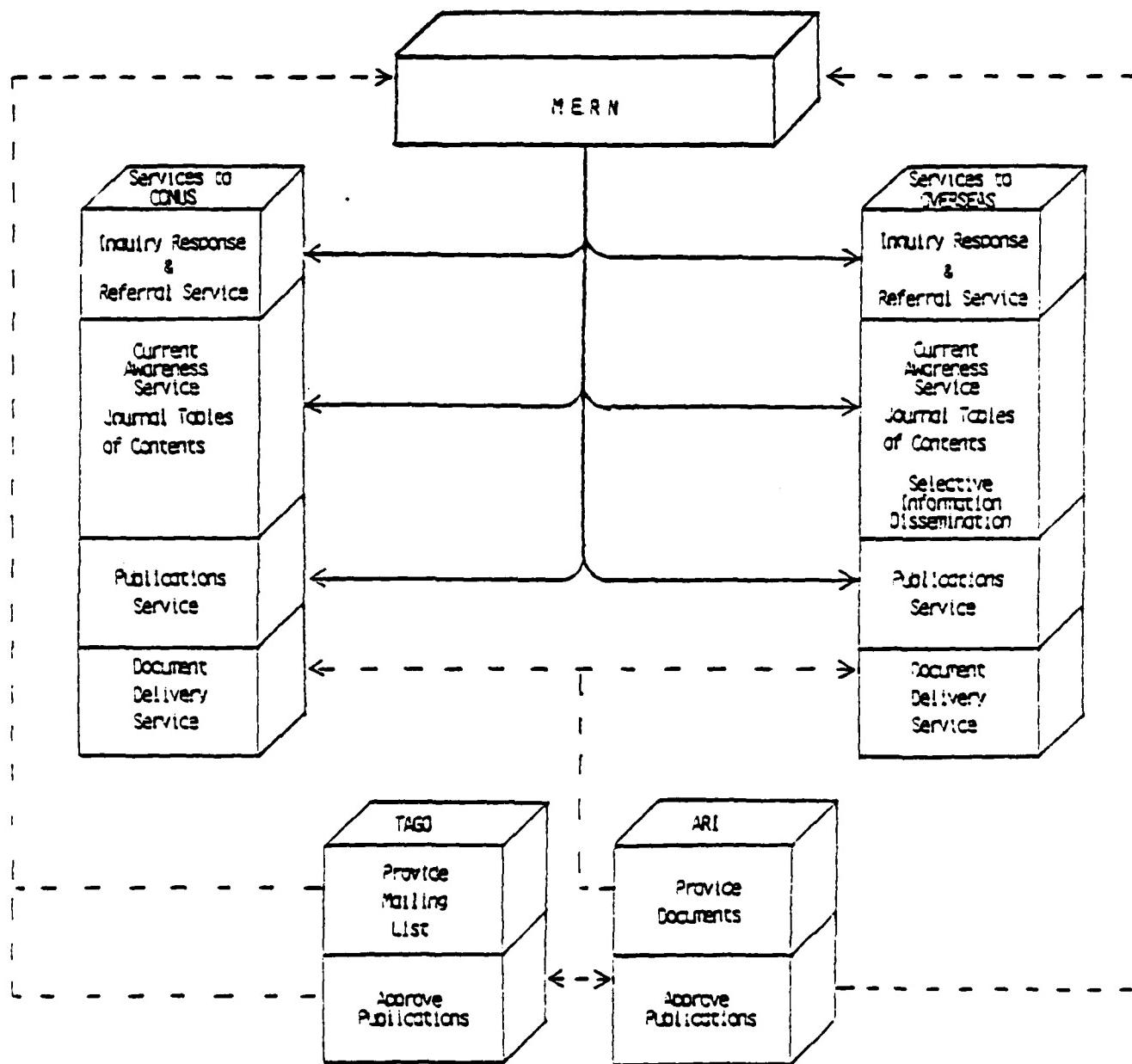
- Design database specifications
- Load, test, and debug the file
- Gather non-bibliographic material for database
- Develop questionnaire to ESOs, regarding program descriptions
- Submit to COTR
- Submit to TAGO
- Distribute to ESO
- Organize returns
- Incorporate program information into database
- Update information
- Prepare abstracts for bibliographic materials in collection and non-bibliographic material
- Key data
- Update the database file
- Develop software to add ERIC & NTIS records
- Search ERIC & NTIS and store records in HERN database
- Reformat ERIC & NTIS files
- Conduct database searches for the Inquiry Response Service and Selective Dissemination of Information



Key:

- ▲ initiate/complete activity
- >----< on-going activity

SERVICE INTERRELATIONSHIPS AMONG  
MERN, ARI, AND TAGO



KEY:

- User services provided directly through MERN
- - - Intermediary support to MERN

Exhibit 5.3

Exhibit 5.4

USER SERVICES

Inquiry Response Service

- Establish account with commercial database vendors
- Print Inquiry Processing Form
- Print Information Request Form
- Write articles regarding Inquiry Response Service for newsletter
- Provide inquiry response service
- Distribute Information Request Form to ESOs via newsletter

Referral Service

- Add records to database
- Provide referral service

Current Awareness Service

- Journal Tables of Contents
- Identify journals to be included
- Identify journals received at ARI
- Initiate subscriptions for journals not received at ARI
- Photocopy tables of contents
- Distribute to ESOs
- Selective Dissemination of Information
- Develop software to store interest profiles
- Solicit interest profiles from users
- Store profiles in computer
- Run searches and distribute results

Document Delivery Service

- Establish procedures with ARI liaison
- Alter database records to indicate ARI as distribution source
- Provide document delivery service

Publications Dissemination

- Brochure and Rolodex Card
- Write and design
- Submit to COTR
- Revise
- Submit to TAGO
- Print 1,200 copies
- Distribute

Newsletter

- Gather information
- Write articles
- Request mailing labels from TAGO
- Edit and proofread
- Submit text to COTR
- Revise text
- Submit text to TAGO
- Print copies
- Distribute

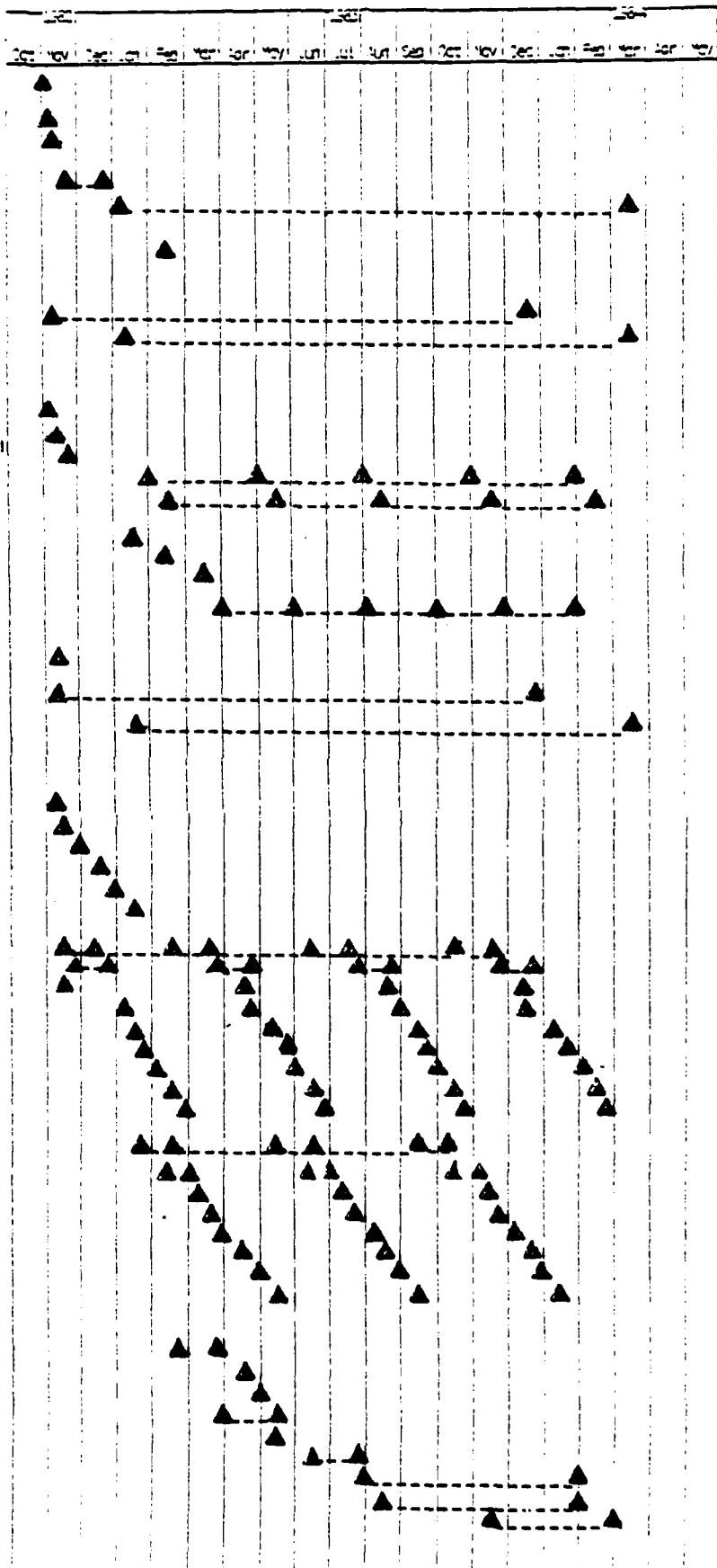
Fact Sheets

- Gather information
- Write text
- Edit and proofread
- Submit text to COTR
- Revise text
- Submit text to TAGO
- Print copies
- Distribute

MERN Access

- Develop procedures for pilot test
- Submit outline to COTR
- Submit outline to T CO
- Develop training materials
- Contact installations
- Conduct training sessions
- Pilot test
- Monitor database usage
- Analyze pilot test data

TASK TIMELINE



Key:

- ▲ initiate/complete activity
- >----< on-going activity

Once the MERN is fully operative, promulgation of available services would be continued through a variety of publications, including a brochure, Network fact sheets, and newsletter.

In order to assure timeliness of all publications, a mechanism for coordinating input from both ARI and TAGO will be devised shortly after the design plan is approved. The interrelationship of the two agencies to the MERN is illustrated in Exhibit 5.3, and a timeline for the execution of promotional and outreach activities is found in Exhibit 5.5.

#### Reporting Mechanism to ARI

The formal mechanism for reporting to ARI will be through the deliverables stipulated in the BSRC contract between ARI and InterAmerica Research Associates. Documentation of the first planning phase - The Needs Assessment Report - was completed in September 1982. This report represents the second planning phase - the MERN Design Plan. Subsequent reports to be produced will reflect the implementation and evaluation of all MERN activities as well as the documentation of all components necessary to phaseover the project to a successor system operator. A list of all reports to be provided to ARI is found in Exhibit 5.6

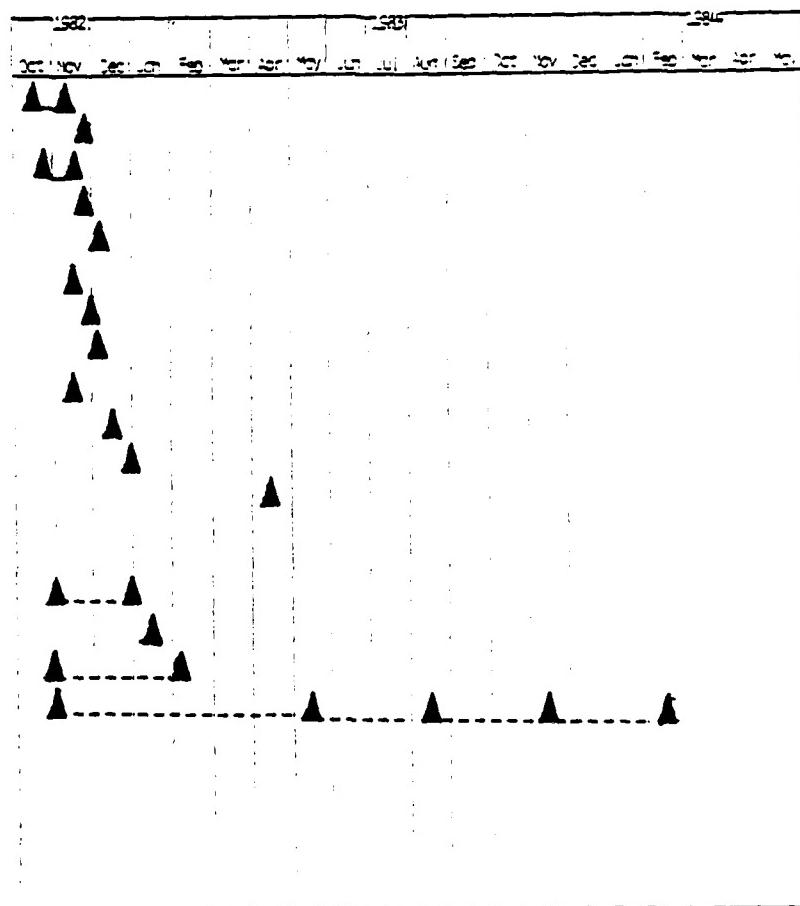
Exhibit 5.5

PROMOTION AND OUTREACH

TASK TIMELINE

Promotions

- Design logo
- Submit to COTR
- Design stationery
- Submit to COTR
- Print stationery
- Write introductory letter for ESOs
- Submit to COTR
- Submit to TAGO
- Request mailing labels from TAGO
- Reproduce letter
- Distribute letter and brochure to ESOs
- Attend Army Day at University of Maryland



Key:

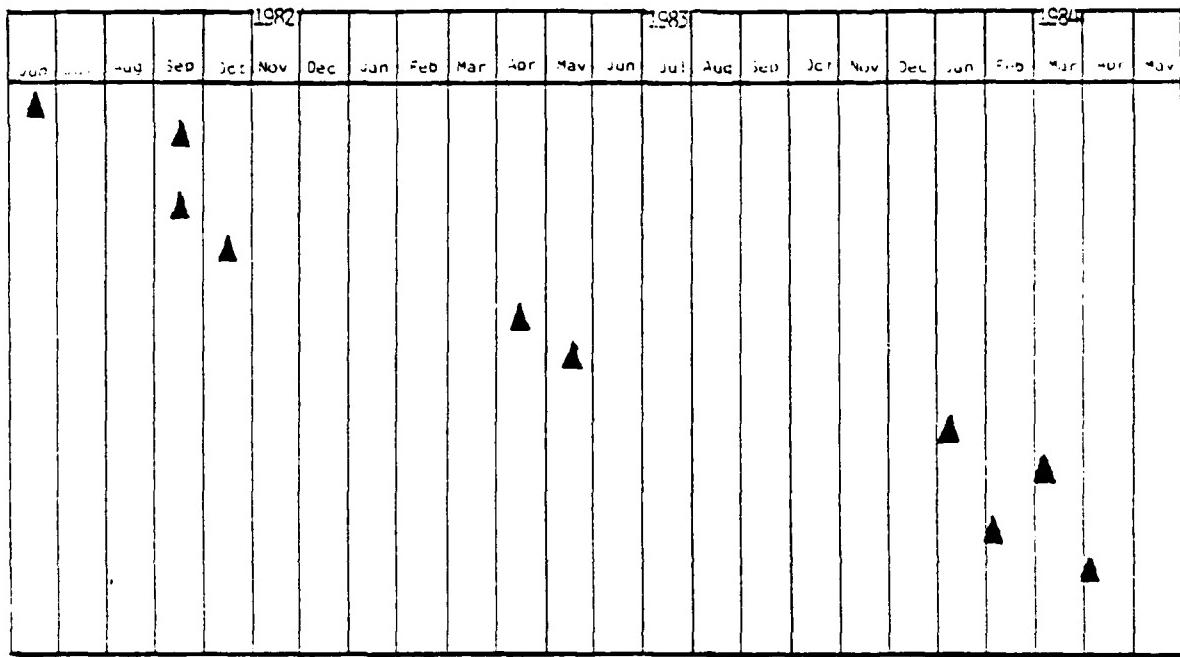
- ▲ initiate/complete activity
- >----< on-going activity

**Exhibit 5.6**

**MERN REPORTS**

**TASK TIMELINE**

Needs Assessment  
Draft  
Final  
Design  
Draft  
Final  
Interim  
Draft  
Final  
Final  
Draft  
Final  
Phaseover  
Draft  
Final



**Key:**

- ▲ initiate/complete activity
- >----< on-going activity

### Evaluation of the MERN Activities

An important component in the operation of the MERN is the assessment of the effectiveness of its activities. Performance is measured in order to ascertain how well the Network is operating. This information will be useful in monitoring how well the MERN services are meeting the needs of its users.

Roderer, et al. (1981) define evaluation as:

the process of analyzing a system so that decisions can be made concerning the effectiveness of the system in satisfying its objectives. Evaluation is concerned with efficiency, productivity, effectiveness, and quantitative and qualitative changes in specified effects or outcomes. Evaluation is a process of obtaining, delineating, and providing useful information for judging decision alternatives (p.38).

Evaluation of the MERN requires the selection of practical and inexpensive methods for determining overall effectiveness from both an internal and an external perspective. Since quantitative and qualitative data provide an effective guide for the continued development of information services, the evaluation of the MERN will be based on both types of data.

Internal evaluation focuses on the inner operations of the system. In other words the concern, from this perspective, is with the MERN's overall operation and functions. This requires some form of qualitative and quantitative evaluation of the MERN's collection and of all user services and database products, including an analysis of how well quality control procedures are being followed.

External evaluation, on the other hand, is concerned with the users' point of view. It is concerned with understanding the users' satisfaction or dissatisfaction with services that are being provided. Evaluation of service quality will include the monitoring of the utility, flexibility, and relevancy of the database; the practicality and utility of user services; and the effectiveness of the MERN's promotional and outreach procedures.

In the next section, evaluation approaches for each component of the MERN are discussed. They are presented from both an internal and external evaluation perspective, as appropriate. The timeframe for the execution of all evaluation activities is found in Exhibit 5.7.

The MERN Collection and Database. The evaluation of the MERN collection and database per se will be undertaken from an internal evaluation perspective. The major concern is their overall quality.

Since the MERN collection is to be used primarily by the Information Specialist to respond to users' requests, criteria for evaluating its effectiveness will be the extent and mode of its internal use. In other words, the key evaluation questions are:

- How useful is the collection in responding to user requests?
- To what extent and for how many user services have materials in the collection been used?

**Exhibit 5.7**

**EVALUATION**

**TASK TIMELINE**

**Document Collection**

Internal

Collect statistical data

Analyze data

Perform List Check

**Database**

Internal

Assess internal processing capabilities

Perform Source Document Test

**User Services**

Internal

Collect statistical data

Analyze data

External

Develop questionnaire

Submit to COTR

Revise

Send to users

Analyze data

Collect informal telephone reactions

Collect formal telephone reactions

Analyze data

**Publications**

Internal

Review by ARI

Review by TAGO

External

Develop Evaluation Checklist

Submit to COTR/TAGO

Revise

Print

Distribute

Analyze data

**Pilot Test**

Internal

Collect user statistics

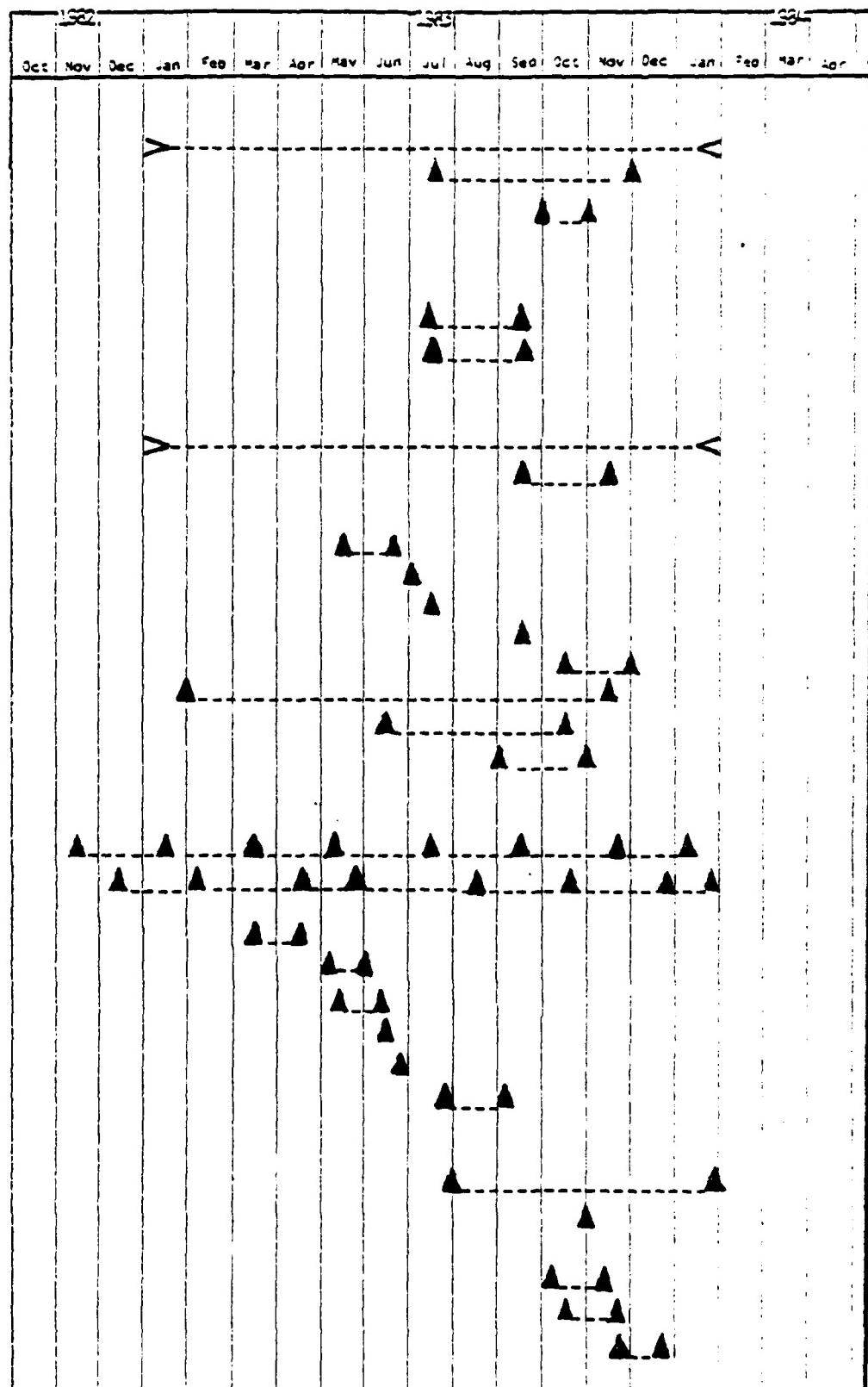
Analyze data

External

Telephone interviews of librarians

Telephone interviews of users

Analyze data



Key:

▲ initiate/complete activity

>----< on-going activity

In order to answer the first question, the Information Specialist will maintain a log of difficulties and successes in using the collection as a tool to respond to user requests. The second question will be answered through statistical records maintained by the MERN staff of the number of times and purpose(s) items from the collection including the vertical file have been used in the provision of user services and in the development of publications.

In addition to evaluating the effectiveness of the collection, its quality will be assessed in approximately the ninth month after implementation of the MERN services. The "list checking method" (Lancaster, 1977) will be used for this purpose. This involves the identification of a select group of important bibliographic resources in the area of adult basic skills education and the construction of carefully selected bibliographic references against which materials in the collection can be checked to determine the percentage of these significant materials that have been acquired by the MERN. This type of evaluation should reveal any weaknesses in the coverage of the collection.

The internal processing capabilities of the MERN database, including quality control, are to be evaluated between the sixth and the eighth month after the database becomes operative. The key questions for this component of the evaluation are the following:

- How efficient are the internal processing capabilities of the MERN database?
- What are the number and types of services being provided through use of the database?

- How cost-effective are the services that are being provided?

All three questions can be answered through the analysis of the statistical and qualitative data maintained by the MERN staff. The first requires an assessment of:

- the processing time for cataloging, indexing, abstracting;
- whether the database records conform to the established standard; and
- the degree of difficulty in adding to, maintaining or changing records.

The second question necessitates an analysis of:

- the number of requests received and processed;
- turnaround time;
- the variation of response time;
- the number of requests by specific type of service;
- the type of questions posed by user groups; and
- the most frequently requested topics.

This information will be synthesized from the Information Request Forms (Exhibit 4.1) and Inquiry Processing Forms (Exhibit 4.2) completed each time the Information Specialist responds to a user's request.

Cost-effectiveness will be measured by maintaining records of staff hours charged by function and/or by comparing actual with projected expenses.

A source document test (King and Bryant, 1971) will be conducted after the MERN database has approximately 2,500 records in order to assess the indexing quality of the database and the quality of abstracts. The results of this assessment will be used as an index of the database's potential usefulness to users. The test requires the random extraction of at least one hundred (100) documents from the database, and the design of a request for which each document would be a relevant response. The requests would be searched first through formal index terms and later in a free text format. The retrieved citations from both searches would then be assessed for their relevance. Depending on whether the source document was retrieved, the recall would be considered to be 100 or zero. This procedure, according to King and Bryant, would be considered successful only if out of 100 searches, 90% of the citations predicted were recalled.

User Services. It is assumed that user satisfaction with all the MERN services including publications will be the major barometer for measuring success. The primary question to be answered is: How useful and timely is the information that is being provided to the user through the MERN?

The majority of the data for this component of the evaluation will be dependent upon user responses which will be solicited through structured telephone interviews, a self-mailing postcard questionnaire, and a publication checklist. Although the MERN publications will be evaluated by their audience, an internal evaluation of their quality has been built into the operational

activities associated with their development. As already discussed, both ARI and TAGO will have the responsibility for review and approval of all publications. This review process will thus be used as one index of the quality of all the MERN publications.

In order to assess user satisfaction with the MERN services, telephone interviews will be conducted with selected MERN users. A pattern will be established whereby every 20th user will be called approximately two weeks after using the MERN and queried as to his/her general satisfaction with the services and materials provided. The interviews will be structured and will include questions such as:

- How often do you use the MERN?
- What proportion of your information needs are being responded to through the MERN services?
- How can the MERN services be improved?

It is also planned that a brief questionnaire printed on a self-mailing postcard be included with every literature search or other database service. The questions on the postcard will be designed to solicit structured information and will also encourage users to provide unstructured responses regarding their satisfaction towards the MERN services.

A more expansive evaluation of all user services including the current awareness, referral, document delivery, and publication dissemination services will be solicited via two brief questionnaires or checklists. The first checklist will be distributed with the second fact sheet and will focus on all user services, except publications. The second will

be included in the second edition of the newsletter and will focus solely on user satisfaction with MERN publications. Responses to these checklists will serve a formative evaluation function whereby users' reactions to all services can directly be used to refine services and to guide the development of subsequent newsletters and fact sheets.

Pilot Test. As described in Chapter 4, a pilot test whereby users will be provided with access to the MERN data base through existing library installations is planned. The major issues to be considered in the evaluation of this component are related to the practicality of providing field access to the MERN database and to the response of users to its availability through installation libraries. In order to evaluate these issues, both statistical data and qualitative feedback from both librarians and users will be solicited.

Statistical data will include information regarding the number of search hours and the origin of the user. These data will provide a general understanding of the use of the database.

Information regarding librarians' and users' reactions will be solicited via telephone interviews. Librarians will be queried as to their reactions to providing direct access to the MERN database, how they reached new users, what would encourage use of the system, and impressions of users' reactions to the service. In order to evaluate user satisfaction, approximately twenty users will be contacted and asked about their reactions to the service. The summary of these

qualitative data together with the statistical data should provide a direction for future planning of providing computerized access to the MERN database through existing library resources.

## References

- King, D. and Bryant, E.C. The evaluation of information services and products. Washington, D.C.: Information Resources Press, 1971.
- Roderer, N.K., King, D.W., Wiederkehr, R.R.U., Zais-Gabbert, H. Evaluation of online bibliographic systems. Rockville, MD: King Research, Inc., July, 1981.
- Lancaster, F.W. The measurement and evaluation of library services. Arlington, VA: Information Resources Press, 1977.